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U. S. Network Connections Regulatory Approval Guide

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Table of Contents

1. SCOPE 1

2. REFERENCES 2

2.1 ACTA DOCUMENTS 2
2.2 FCC DOCUMENTS 2
2.3 ADDITIONAL DOCUMENTS 2

3. ACRONYMS AND DEFINITIONS 4

4. INTRODUCTION 7

4.1 BACKGROUND 7
4.2 OVERVIEW OF THE TTE APPROVAL PROCESS 8

5. RESPONSIBILITIES OF THE "RESPONSIBLE PARTY" 9

5.1 THE "RESPONSIBLE PARTY" 9
5.1.1 Responsible Party under the Supplier's Declaration of Conformity Method 9
5.1.2 Responsible Party under the Telecommunication Certification Body Certification Method 9
5.2 WHO HOLDS WHAT DOCUMENTS? 10
5.2.1 Documents Held by the Responsible Party 10
5.2.2 What to do with the Supplier's Declaration of Conformity? 10
5.2.3 How long must the documents be held? 11
5.2.4 Language Requirements 11
5.3 CONTINUING COMPLIANCE 11
5.4 FCC ENFORCEMENT OVERVIEW 11

6. TELECOM TERMINAL EQUIPMENT TESTING AND REPORT GENERATION 13

6.1 TELECOMMUNICATIONS TERMINAL EQUIPMENT TEST REQUIREMENTS 13
6.2 TEST LABORATORY REQUIREMENTS 13
6.3 TEST PROCEDURES 13
6.4 WHAT IS IN THE TEST REPORT 14
6.5 WHAT TO DO WITH THE TEST REPORT 14

7. WRITING A SUPPLIER'S DECLARATION OF CONFORMITY 15

7.1 SDOC CONTENT 15
7.2 SDOC FORM AND APPEARANCE 15
7.3 PART 68 CERTIFICATE FROM A TELECOMMUNICATIONS CERTIFICATION BODY 15

8. WHAT IS NEEDED TO SHIP THE PRODUCT 16

8.1 PRODUCT LABELING REQUIREMENTS 16
8.2 CUSTOMER INFORMATION 16
8.2.1 General Requirements For All Equipment 16
8.2.2 Customer-Owned Coin/Credit Card Phones 18
8.2.3 Data Equipment 18
8.2.4 Private (Leased) Lines For Analog Services 19
8.2.5 Systems 19
8.2.6 Adjuncts - KX and PX Devices 19
8.2.7 OEM Devices 19
8.2.8 Automatic Dialers 20
8.2.9 Toll Restriction and Least Cost Routing Equipment 20
8.2.10 Equipment With Direct Inward Dialing (DID) 20
8.2.11 Equal Access Requirements 21

8.2.12 Electrical Safety Advisory *21*
8.2.13 Equipment With Fax Capability *21*
8.2.14 Alarm Dialing Equipment *21*
8.3 INCLUDING THE SDOC WITH THE PRODUCT 22
8.4 FILING WITH THE ACTA DATABASE 22
8.4.1 Responsible Party Code *23*
8.4.2 Indemnification and Liability Statement *23*
8.4.3 TCB Filings with ACTA Database *23*
8.4.4 SDoC Filings with the ACTA Database *23*
8.5 MAKING AN SDOC PUBLICLY AVAILABLE 24
8.6 IMPORTATION AND CUSTOMS CONSIDERATIONS 25
8.6.1 Importation for Test and Evaluation *25*
8.6.2 Importation for Sale *25*
8.6.3 Country of Origin Requirements *25*

9. SPECIAL CASE - TTE COMPONENT APPROVAL 27

9.1 DEFINITIONS 27
9.1.1 Complete Telephony Function *27*
9.1.2 Component Approval, Host-Independent *27*
9.1.3 Component Approval, Host-Specific *27*
9.1.4 Normal Approval *28*
9.2 ADMINISTRATIVE REQUIREMENTS FOR COMPONENT CERTIFICATION 28
9.2.1 Demonstration of Compliance *28*
9.2.2 Device Description *28*
9.2.3 Equipment Evaluation *28*
9.2.4 ACTA Database Filing *29*
9.3 COMPLIANCE EVALUATION PROCESS 29
9.4 GENERAL REQUIREMENTS 30
9.4.1 Guide to Applying Requirements *30*
9.4.2 General Notes *32*
9.5 LEAKAGE CURRENT AND HAZARDOUS VOLTAGE 33
9.6 IN-BAND SIGNAL POWER 33
9.6.1 Analog, Host-Independent *33*
9.6.2 Digital, Host-Independent *34*
9.6.3 Analog and Digital, Host-Specific *34*
9.7 OUT-OF-BAND SIGNAL POWER 34
9.7.1 Host-Independent *34*
9.7.2 Host-Specific *34*
9.8 THROUGH TRANSMISSION PATHS 34
9.8.1 Analog-to-Analog, Host-Independent *34*
9.8.2 Analog-to-Digital, Host-Independent *35*
9.8.3 Digital-to-Digital, Host-Independent *35*
9.8.4 Analog and Digital, Host-Specific *35*
9.9 CUSTOMER CONTROL OF COMPLIANCE PARAMETERS 35
9.10 IDENTIFICATION OF HOST EQUIPMENT 36
9.11 MIXING OF HOST EQUIPMENT TYPES 36
9.12 CONTROL OF RINGER EQUIVALENCE NUMBER (REN) 36
9.13 CUSTOMER DOCUMENTATION 37
9.13.1 Approved Component Devices, General *37*
9.13.2 Approved Component Devices, Host-Independent *37*
9.13.3 Approved Component Devices, Host-Specific *38*
9.13.4 Approved Component Devices, Hearing Aid Compatible *38*
9.13.5 Approved Component Devices, Customer Control *38*
9.13.6 Approved Component Devices With Digital Through Paths *38*
9.13.7 Unapproved Component Devices *39*
9.14 PRODUCT LABELING 39

10. DISABILITY ISSUES 40

10.1 HEARING AID COMPATIBILITY (HAC), MAGNETIC COUPLING 40
10.2 HEARING AID COMPATIBILITY, VOLUME CONTROL 40
10.3 CARRIERS SUPPLYING EQUIPMENT TO THE DISABLED 40
10.4 DISABILITY PROVISIONS OF 1996 TELECOMMUNICATIONS ACT 40
10.5 ADDITIONAL INFORMATION ABOUT TELECOM AND DISABLED ACCESSIBILITY 40

11. HOW TO HANDLE PRODUCT CHANGES AND MODIFICATIONS 42

11.1 CHANGES TO PRODUCTS WITH SDOC APPROVAL 42
11.1.1 Product Changes Affecting the ACTA Database Information 42
11.1.2 Product Changes NOT Affecting the ACTA Database Information 43
11.1.3 Re-approval under TCB Certification 43
11.2 CHANGES TO PRODUCTS WITH TCB CERTIFICATION 43
11.2.1 Modification filing with a TCB 43
11.2.2 Re-approval under SDoC 44
11.3 CHANGES TO PRODUCTS PREVIOUSLY APPROVED BY THE FCC 44

12. WAIVER INFORMATION 45

12.1 WAIVER OF ACTA-APPROVED TECHNICAL CRITERIA OR ADMINISTRATIVE PROCEDURES 45
12.2 WAIVER OF FCC RULES 46
12.2.1 Process Guidelines for Part 68 Waivers 46
12.2.2 Format Guidelines for Part 68 Waiver Petitions 47

APPENDIX A: GENERAL INFORMATION 49

APPENDIX B: EXAMPLE SUPPLIER'S DECLARATION OF CONFORMITY (SDOC) 51

APPENDIX C: EXAMPLE TCB CERTIFICATE 53

APPENDIX D: ACTA INDEMNIFICATION AND LIABILITY STATEMENT 55

D.1 THE ACTA REQUIREMENT 55
D.2 EXAMPLE STATEMENT: 55

APPENDIX E: TTE INFORMATION FOR THE ACTA DATABASE 57

E.1 LIST OF REQUIRED ACTA TTE DATABASE INFORMATION 57
E.2 DETAILED DESCRIPTIONS OF REQUIRED INFORMATION 58

APPENDIX F: PART 15, TTE AND RF INTERFERENCE ISSUES 66

F.1 APPLICABILITY OF RADIO FREQUENCY REGULATIONS TO TELEPHONE AND DATA EQUIPMENT 66
F.2 SPECIAL REQUIREMENTS FOR IMPORTATION OF RF DEVICES 66
F.3 RADIO FREQUENCY INTERFERENCE TO TELEPHONE AND DATA TERMINAL EQUIPMENT 67

FOREWORD

This Technical Service Bulletin (TSB) describes the process a manufacturer or supplier of telecommunications terminal equipment (TTE) should follow in order to achieve approval by the Supplier's Declaration of Conformity method or Telecommunications Certification Body (TCB) certification described in Federal Communications Commission (FCC) rules, 47CFR Part 68, as amended February 2001. It provides the "glue" or links between other documents that focus on specific aspects of the process, such as the TTE technical criteria or labeling requirements, and maps those documents into the overall process. This release is intended to be sufficiently detailed to deal with most of the questions and issues that might arise, but readers should be aware that updates and revisions are likely as new issues surface.

This TSB was produced by Task Group 2 (TG2) of Subcommittee TR-41.11, Administrative Regulatory Considerations. It was developed in accordance with TIA/EIA procedures and represents the consensus position of the Working Group and its parent subcommittee, which served as the formulating group. It has also received concurrence from Engineering Committee TR-41, User Premises Telecommunications Requirements. This TSB may be updated periodically as necessary.

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1. SCOPE

This Technical Services Bulletin (TSB) provides guidance to the Responsible Party (as defined in Federal Communications Commission (FCC) rules 47CFR Part 68) who wishes to achieve approval of telecommunications terminal equipment (TTE) for connection to the U.S. public switched telephone network by the Supplier's Declaration of Conformity (SDoC) or Telecommunication Certification Body (TCB) methods.

Readers should also refer to other documents listed in the section 2 References below, since this TSB does not contain:

- Terminal equipment requirements (refer to TIA/EIA/IS-968, TIA/EIA/IS-883, and T1.TRQ.6-2001)
- Equipment labeling information (refer to TSB-168)
- Terminal equipment testing methodology (refer to TSB-31B)
- TTE database filing guidelines
- Information on the design or engineering of terminal equipment
- Issues beyond telecom, such as product safety or electromagnetic compatibility (EMC)

2. REFERENCES

At the time of publication, the editions of each of the referenced documents shown below were valid. However, all standards are subject to revision, and new standards may be issued; the reader is encouraged to seek out and use the most recent editions.

2.1 ACTA Documents

The following technical documents are available from the Administrative Council for Terminal Attachment (ACTA). Readers are encouraged to periodically revisit the ACTA Web site at <http://www.part68.org> to get the latest versions, and any new documents. The ACTA documents are authorized by FCC rules 47CFR Part 68, Section 68.7 and Subpart G.

Technical Requirements for Connection of Terminal Equipment to the Telephone Network, TIA/EIA/IS-968, July 2001 (approved by the ACTA on 11 July 2001)

Supplemental Criteria for Stutter Dial Tone Detection Devices and ADSL Modems to Prevent Harm to the Telephone Network, TIA/EIA-883, June 2001 (approved by the ACTA on 11 July 2001). (Note: This document contains supplemental technical criteria to that in TIA/EIA/IS-968.)

Technical Requirements Document, SHDSL, HDSL2, HDSL4 Digital Subscriber Line Terminal Equipment to Prevent Harm to the Telephone Network, ATIS T1.TRQ.6-2001, November 2001, adopted by the ACTA on 15 January 2002. (Contains technical criteria supplementing those in TIA/EIA/IS-968.)

Telephone Terminal Equipment Labeling Requirements, TIA/EIA/TSB-168, June 2001 (approved by the ACTA on 11 July 2001). (Note: These are the ACTA labeling requirements.)

Guidelines & Procedures for submittal of information to ACTA for inclusion in the database of approved Telephone Terminal Equipment, (an ACTA document), Rev 1.1, October 2001

2.2 FCC Documents

2000 Biennial Regulatory Review of Part 68 of the Commission's Rules and Regulations, FCC 00-400, Docket 99-216, released 21 December 2000, also published in the Federal Register Vol 66, No. 16, 24 Jan 2001, pp. 7579-7589. The original Order as released is available at: <http://www.fcc.gov/Bureaus/Common_Carrier/Orders/2000/fcc00400.doc>

Order On Reconsideration In CC Docket No. 99-216 And Order Terminating Proceeding In CC Docket No. 98-163, Docket 99-216 and Docket 99-163, released 10 April 2002.

Fact Sheet - Customer Premises Equipment Rules, background of Part 68 terminal equipment rulemaking, at:
<http://www.fcc.gov/Bureaus/Common_Carrier/Factsheets/CPErules.doc>

FCC Rules, 47CFR Parts 2, 15 and 68

2.3 Additional Documents

Part 68 Rationale and Measurement Guidelines, TIA/EIA/TSB-31B, February 1998

Part 68 Application Guide, Rev. D-3, January 15, 2001, from the Telecom Industry Association's TR-41.11 committee, available at: <http://www.tiaonline.org/standards/sfg/tr-41/>

General criteria for supplier's declaration of conformity, ISO/IEC Guide 22, Second edition, 1996, available from the ISO at: <http://www.iso.ch/> or the IEC at <http://www.iec.ch>

Codes for the representation of names of countries and their subdivisions, ISO-3166, available from the ISO at: <http://www.iso.ch/>

Network and Customer Installation Interface Connector Wiring Configuration Catalog, Technical Report No. 5, available from the ATIS at: <http://www.atis.org/>

Network to Customer Installation Interfaces - Asymmetric Digital Subscriber Line (ADSL) Metallic Interface, ANSI T1.413-1998.

Network to Customer Installation Interfaces - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground Start Signaling, ANSI T1.401-2000.

Network to Customer Installation Interfaces - Analog Voicegrade Switched Access Lines Using Loop-Start and Ground Start Signaling with Line-Side Answer Supervision Feature, ANSI T1.401,01-2000.

Network-to-Customer Installation Interfaces - Analog Voicegrade Switched Access Lines with Distinctive Ringing Features, ANSI T1.401.02-2000

Network to Customer Installation Interfaces - Analog Voicegrade Switched Access Lines with Calling Number Delivery, Calling Name Delivery or Visual Message Waiting Indicator Features, ANSI T1.401.03-1998

Network and Customer Installation Interfaces - Analog Voicegrade Switched Access Lines with the Call Waiting, Distinctive Call Waiting, or Calling Identity Delivery on Call Waiting Feature, ANSI T1.401.04-2000

The ANSI T1 Standards are available from ATIS at http://www.t1.org

3. ACRONYMS AND DEFINITIONS

For the purposes of this Standard, the following acronyms and definitions apply.

A2LA - American Association for Laboratory Accreditation

ACTA - Administrative Council for Terminal Attachment (see <http://www.part68.org>)

ADSL - Asynchronous Digital Subscriber Loop

ATIS - Alliance for Telecommunications Industry Solutions

BRI - Basic Rate Interface

CFR - Code of Federal Regulations

CPE - Customer Premises Equipment

CSU - Channel service Unit

DD - Digital Device

DID - Direct Inward Dialing

DoC - Declaration of Conformity

DSP - Digital Signal Processing

DTMF - Dual Tone Multiple Frequency

E&M - Ear & Mouth

EIA - Electronic Industries Alliance

EMC - Electromagnetic Compatibility

EUT - Equipment Under Test

FAX - Facsimile

FCC - Federal Communications Commission (see <http://www.fcc.gov>)

FIC - Facility Interface Code, specifying type of telecom service performed

FM - Frequency Modulation

GS - Ground Start

HAC - Hearing Aid Compatible

IEC - International Electrotechnical Commission (see <http://www.iec.ch>)

IS - Interim Standard

ISO - International Standards Organization (see <http://www.iso.ch>)

KX - Equipment code referring to adjuncts and components used with host systems

LS - Loop Start

MOH - Music on Hold

MRA - Mutual Recognition Agreements or Arrangements

MVIP - Multi-Vendor Integration Protocol

NC/NCI™ - Network Channel and Network Channel Interface (Telcordia trademark)

NIST - National Institute of Science and Technology (see <http://www.nist.gov>)

NVLAP - National Voluntary Lab Accreditation Program (see <http://ts.nist.gov/ts/htdocs/210/214/214.htm>)

OEM - Original Equipment Manufacturer

OET - Office of Engineering and Technology (FCC)

OPS - Off Premises Station

Part 68 - Regulations for TTE within Title 47 of the Code of Federal Regulations

PBX - Private Branch Exchange

PC - Personal Computer

PRI - Primary Rate Interface

PSD - Power Spectral Density

PSDS - Public Switched Digital Service

PSTN - Public Switched Telephone Network, including derived private lines

PX - Equipment code referring to adjuncts used with specified hybrid and PBX systems (for example, voice mail equipment behind PBXs)

R&O - Report and Order

REN - Ringer Equivalence Number

RF - Radio Frequency

RFI - Radio Frequency Interference

RP - Responsible Party (see Section 5.1)

RPC - Responsible Party Code (also "grantee code")

R&TTE - Radio and Telecom Terminal Equipment Directive (European Union)

SCSA - Signal Computing System Architecture (see <http://www.scsa.org/home.htm>)

SDO - Standards Development Organization

SDoC – Supplier's Declaration of Conformity

SOC - Service Order Code

T&R - Tip and Ring

T1 - Telecom standard for 1.544 MB/s digital service

TCB - Telecommunication Certification Body

TIA - Telecommunications Industry Association (see <http://www.tiaonline.org>)

TSB - Technical Services Bulletin (term used by the TIA)

TTE - Telecommunications Terminal Equipment (for example, telephones, adjuncts, modems, T1 and subrate equipment, ADSL modems, SHDSL modems). As used in this document, it specifically refers to customer premise equipment subject to FCC rules in Part 68 for connection to the PSTN.

USOC - Universal Service Order Code

VC - Volume Control

VoIP - Voice over Internet Protocol

47CFR - Title 47 (telecommunications) of the U.S. Code of Federal Regulations

4. INTRODUCTION

4.1 Background

The 1996 U.S. Telecommunications Act required the Federal Communications Commission (FCC) to review its rules in every even-numbered year and repeal or modify any rules no longer in the public interest. Consistent with a worldwide deregulatory trend, in 1999 the FCC authorized TCB approval of TTE. The FCC in 2001 removed itself from direct approval of TTE and authorized direct approval by Responsible Parties using the SDoC process. While the FCC reiterated the necessity of preventing network harm and decided to maintain its enforcement responsibilities, it delegated full responsibility for product approval to industry in the two programs described below.

a) ***Telecommunication Certification Bodies*** - In December 1998, the FCC adopted new rules (in Docket 98-68) to provide the option of private sector approval for telecom terminal equipment that previously required approval by the FCC. The new third-party accreditation program was intended to increase the efficiency of the FCC terminal equipment approval process by providing the option of certification by designated private parties, known as Telecommunication Certification Bodies (TCBs). TCBs are allowed to certify devices for network connection. TCBs are accredited and designated in accordance with FCC rules 47CFR Section 68.160.

   The TCB program was intended to fulfill the FCC's obligations to implement private sector approvals under the recently negotiated Mutual Recognition Agreements and Arrangements (MRAs) that the U.S. entered into with other countries. MRAs are broadly intended to provide for mutual recognition of product certifications, whereby a single product certification will provide access to the markets of all member states.

   TCBs provide Responsible Parties with a partnering approval process. Under the MRAs, certification by a FCC-designated TCB is recognized and accepted by all MRAs signatories. TCBs were viewed as a means for facilitating speedy and convenient entry to most international markets.

b) ***Supplier's Declaration of Conformity*** - In July 1999, the FCC held a series of public fora (under Docket 99-216) to explore whether and how to streamline and privatize the FCC Part 68 processes for rulemaking and equipment certification (see Public Notice DA 99-1108). Attendees included service providers, manufacturers, testing laboratories, consultants, consumers, professional and industry associations, and other interested parties.

   As a result of these fora, the FCC issued a Notice of Proposed Rulemaking (FCC 00-171, released 22 May 2000), followed by a Report and Order (FCC 00-400, released 21 December 2000). These documents are available from the FCC's Web site <http://www.fcc.gov/>. In this order the FCC delegated maintenance of TTE technical criteria for connection to the telephone network to industry, and asked industry to organize a gatekeeper organization. This organization would manage approval of applicable technical criteria industry standards and manage a public database of approved equipment. Manufacturers and suppliers of TTE also would be allowed to issue a Supplier's Declaration of Conformity (SDoC) in lieu of sending an application for registration and detailed test report to the FCC. The optional TCB process remains in effect.

c) ***TTE Deregulation Elsewhere - The Worldwide Context*** - In parallel, the European Commission published European Directive 1999/5/EC, the Radio and Telecommunications Terminal Equipment Directive (R&TTE), which came into effect in April 2000 after several years of development work. The R&TTE Directive is consistent with both the "New Approach" to technical harmonization and standardization and the "Global Approach" to conformity assessment, as laid down by the European Commission.

The R&TTE directive permits the use of the DOC methodology for all wireline equipment within its scope. The FCC Order 00-400 was developed with an awareness of the R&TTE directive and a conscious attempt was made to ensure that DOC principles of the R&TTE Directive were reflected in the FCC requirements.

4.2 Overview of the TTE Approval Process

The overall process for equipment approval is outlined below. Specific details are shown elsewhere in this document.

a) ***Design*** - TTE should be designed to conform with the U.S. TTE technical criteria in 47CFR Part 68 and the criteria adopted by ACTA: currently TIA/EIA/IS-968; TIA/EIA/IS-883; and ATIS T1.TRQ.6-2001. The requirements of IS-883, for ADSL and stuttered dial tone detect TTE, may soon be incorporated into a new revision of TIA/EIA/IS-968.

b) ***Test*** - A representative sample of the final product must be tested to these standards to ensure compliance. TIA/EIA/TSB-31B is a helpful guide. This testing can be done by the manufacturer/supplier itself, or by hiring the services of a competent testing laboratory. (Note: This laboratory need not be accredited by any government or private agency, but technical credentials such as National Voluntary Lab Accreditation Program [NVLAP], American Association for Laboratory Accreditation [A2LA], or equivalent accreditation may be helpful when choosing between competing labs.)

c) ***Test Report*** - The test lab should prepare a detailed test report summarizing its findings of product compliance. The Responsible Party must retain a copy of this report on file in case it becomes necessary to defend the conformity declaration (see FCC record retention rule in 47CFR Part 68, section 68.326).

d) ***Labeling*** - Each product must be labeled in accordance with the ACTA labeling standard, currently TIA/EIA/TSB-168.

e) ***Securing Approval*** - Manufacturers or suppliers of TTE must either secure TCB certification, or prepare and publish a Supplier's Declaration of Conformity.

f) ***Database*** - Finally, SDoCs or TCB Certificates, along with other product information, must be filed in a public database managed by the ACTA. In both cases, ACTA charges a fee for doing this. (While ACTA is working to automate this process in the future, in the short term after 24 July 2001, responsible parties must send the SDoC or TCB Grant and other information to the ACTA, who will enter it manually.) For more information about this process, see "Guidelines & Procedures for submittal of information to ACTA for inclusion in the database of approved Telephone Terminal Equipment," available from the ACTA Web site: <http://www.part68.org>.

5. RESPONSIBILITIES OF THE “RESPONSIBLE PARTY”

5.1 The "Responsible Party"

According to the FCC rules in 47CFR Part 68, section 68.3, the Responsible Party is *“The party or parties responsible for the compliance of terminal equipment or protective circuitry … with the applicable rules and regulations in [47CFR Part 68] and with the technical criteria published by ACTA.”*

While the Responsible Party may be an individual, in most cases it will be a legal entity such as a corporation.

5.1.1 Responsible Party under the Supplier’s Declaration of Conformity Method

The Responsible Party for a SDoC need not be located within the United States. To ensure that the Commission can identify and have access to responsible parties located outside of the United States, however, the FCC requires that responsible parties designate an agent for service of process that is physically located within the United States.

The Responsible Party for a Supplier's Declaration of Conformity is:

- The manufacturer of the terminal equipment, or
- The manufacturer of protective circuitry that is marketed for use with terminal equipment that is not to be connected directly to the network, or
- If the equipment is imported, the importer, or
- If the terminal equipment is assembled from individual component parts, the assembler.

If the equipment is modified by any party not working under the authority of the Responsible Party, the party performing the modifications becomes the new Responsible Party. If the equipment is modified outside the U.S. and imported after modification, the importer becomes the new Responsible Party.

Retailers or original equipment manufacturers may enter into an agreement with the assembler or importer to assume the responsibilities to ensure compliance of the terminal equipment and to become the Responsible Party.

The Responsible Party, if different from the manufacturer, may upon receiving a written statement that the equipment complies with the appropriate technical criteria, rely on the manufacturer or an independent testing agency to determine compliance. The Responsible Party is responsible for the product in any case.

5.1.2 Responsible Party under the Telecommunication Certification Body Certification Method

If a TCB certifies the terminal equipment, the Responsible Party is the holder of the certificate.

Under the TCB certification approach, the Responsible Party need not be located within the United States. To ensure that the Commission can identify and have access to responsible parties located outside of the United States, however, the FCC requires that responsible

parties designate an agent for service of process that is physically located within the United States.

5.2 Who Holds What Documents?

5.2.1 Documents Held by the Responsible Party

Under the SDoC method, the Responsible Party shall maintain records containing the following information[1]:

a) A copy of the Supplier's Declaration of Conformity;

b) The identity of the testing facility, including the name, address, phone number and other contact information;

c) A detailed explanation of the testing procedure used to determine whether terminal equipment conforms to the appropriate technical criteria;

d) A copy of the test results for terminal equipment compliance with the appropriate technical criteria;

e) A complete description of the measurement facilities employed. (See also the document retention requirements in section 5.2.3 below.)

f) The responsible party, if different from the manufacturer, may upon receiving a written statement from the manufacturer that the equipment complies with the appropriate technical criteria, rely on the manufacturer or independent testing agency to determine compliance. Any records that the Administrative Council for Terminal Attachments requires the responsible party to maintain shall be in the English language and shall be made available to the Commission upon a request.

Under TCB certification, the Responsible Party shall keep a copy of the report from the TCB and the certificate issued by that TCB.

5.2.2 What to do with the Supplier's Declaration of Conformity?

Once created, the Responsible Party must make the SDoC widely available. Specifically, they must:

a) Put the SDoC in the user's manual or include it as a separate document with the terminal equipment.

b) Provide the ACTA with a copy. (Note: The SDoC will be available to the public through the ACTA.)

c) Make a copy of the SDoC freely available to the general public:

   1) On their company Web site (in a manner that is also accessible to the disabled; see section 10.5 of this document).

   2) If they do not have a functional and reliable Web site, then they must inform the ACTA, and the ACTA will put a copy on its Web site.

[1] This list of documentation held by the Responsible Party is from Sections 68.320(d), 68.324(e)(2), 68.326 and 68.346 of the FCC rules.

5.2.3 How long must the documents be held?

Under the TCB certification approach, the TCBs must maintain all certification documents for at least five years.

Under the SDoC method, the Responsible Party must maintain all required records for at least 10 years after the manufacture of the equipment has been permanently discontinued (see FCC rules in 47CFR Part 68, section 68.326(b)). If the Responsible Party is officially notified prior to the expiration of the ten-year period that an investigation or any other administrative proceeding involving its equipment has been instituted, records must be maintained until the conclusion of the investigation or a proceeding (even if it exceeds 10 years).

5.2.4 Language Requirements

English must be used for any records the Responsible Party is required to maintain.

5.3 Continuing Compliance

Continuing compliance is applicable to products that receive either SDoC approval or TCB certification. For TCB certification, each TCB is required to perform market surveillance. Applicants for TCB certification should determine the TCB's policy regarding assessment of continuing compliance.

There is an assumption that all products produced will be identically compliant to the test sample that was originally used to demonstrate compliance. One way to do this is to periodically sample and re-test product to the applicable technical criteria. As a guideline, this should be done at least annually, but this depends on the production rate and manufacturing control. The Responsible Party must do whatever is necessary to insure that the compliance of all approved products produced will be continued for the full manufacturing life.

The Responsible Party must retain such test results, description of test procedures, analyses, evaluations, quality control standards, and quality assurance standards as are necessary to demonstrate that the terminal equipment or protective circuitry complies with and will continue to comply with all the applicable Part 68 and ACTA TTE technical criteria for the life of the product.

5.4 FCC Enforcement Overview

When the FCC provided for the Telecommunication Certification Body (TCB) and the Supplier's Declaration of Conformity (SDoC) options for approval of terminal equipment, it allowed more flexibility in the way that terminal equipment is approved for connection to the telephone network. However, the Commission did not relax its insistence that this equipment must not harm the telephone network.

The FCC made it clear in Report & Order (R&O) (FCC 00-400) that it intends to continue enforcing compliance with the technical criteria for terminal attachment (see R&O paragraph 119-120) and to monitor the effectiveness of the TCB and SDoC processes. Telecom carriers may still disconnect harmful terminal equipment, and the FCC promises that suppliers who “fail to comport with the [FCC or ACTA] rules may face enforcement action…” (R&O paragraph 104). Any SDoC can be revoked by the FCC for good cause (see 47CFR section 68.350).

Furthermore, anyone can bring a complaint before the FCC regarding the non-compliance of terminal equipment. The FCC reiterated its determination that consumers, and disabled persons in particular, receive the full level of enforcement currently in place. The FCC has brought into Part 68 (see sections 68.415, '417, '419, and '420) the same complaint process it developed for disabled accessibility complaints in 47CFR Part 6. Suppliers of terminal equipment are also required to designate to the ACTA one or more agents on whom service may be made of all complaints received or other matters related to Part 68. This appears identical to the "agent for service" requirement in 47CFR Part 6, Section 6.18(b) except that the ACTA is to receive the notice of agent instead of the FCC.

6. TELECOM TERMINAL EQUIPMENT TESTING AND REPORT GENERATION

This section is applicable to both SDoC approval and TCB certification.

6.1 Telecommunications Terminal Equipment Test Requirements

As part of the approval process, FCC rules require that responsible parties make measurements of their terminal equipment or take other necessary steps to ensure it complies with FCC Part 68 and the ACTA-specified telecommunications terminal equipment technical criteria (see FCC rules in Sections 68.102, 68.201, and 68.320(a)). To obtain copies of these technical criteria, contact the ACTA or download the technical criteria from their Web site:<http://www.part68.org>

6.2 Test Laboratory Requirements

Test laboratories contracted to test terminal equipment for compliance with the TTE technical criteria need not be accredited. However, responsible parties should always use competent test labs. Specifically, test labs should be:

- Knowledgeable and experienced with Part 68 and TIA/EIA/IS-968 requirements.
- Knowledgeable with Rationale and Measurement Guidelines and terminal equipment testing methodology in TIA/EIA/TSB-31B. TSB-31B is a useful reference for TTE test methodologies (see miscellaneous reference list, paragraph 2.3).

Additional credentials, such as NVLAP, A2LA, or ISO/IEC 17025 accreditation, may also prove useful in assessing the competency of a test laboratory.

Furthermore, the Responsible Party must obtain a description of the measurement facilities and the test plan employed by the test lab, and retain this information on file for future reference (see FCC rules in Section 68.346). The ACTA may require that certain information be included in this description. A copy of this description should be filed with the first submission to the ACTA. If this description changes it should be filed with the next submission to the ACTA (see below).

6.3 Test Procedures

Under the TCB certification approach, TCBs must satisfy certain requirements under the TCB Program and maintain an updated copy of the procedures used to test TTE for conformance to the TTE technical criteria. This requirement applies whether the TCB does the testing itself or relies on results provided by a manufacturer or an independent laboratory.

Under the SDoC method, the Responsible Party must ensure a copy of the procedures used to test TTE for conformance to the technical criteria is on file with the ACTA. This requirement applies whether the Responsible Party does the testing itself or relies on results provided by an independent laboratory. The ACTA will consider these procedures confidential and will not disclose them except in cases of legal compulsion or in support of an FCC regulatory enforcement action.

In all cases, the procedures used should be referenced in the test report and any deviations or exceptions noted (see FCC rules, 47CFR Section 68.326(a)(3)).

6.4 What is in the Test Report

At a minimum, the test report should contain (see FCC rules 47CFR Part 68, section 68.326a):

a) A description of the product, including the relevant technical specifications.

b) All relevant diagrams, schematics, parts lists, and photographs.

c) Test results showing compliance with the applicable technical criteria.

d) A detailed explanation of the testing procedure used.

e) The identity of the testing facility used, including its name, address, telephone number, and any other relevant contact information.

6.5 What to do with the Test Report

Under the TCB certification approach, the Responsible Party must retain the complete test report for future reference.

Under the SDoC approval method, the Responsible Party must retain the complete test report for at least 10 years after the date the product was last manufactured (see FCC rules 47CFR Part 68, section 68.326b).

7. WRITING A SUPPLIER'S DECLARATION OF CONFORMITY

The FCC specifies what must be in each SDoC. A suggested template, which is recommended as a starting point, is shown in Appendix B. Other helpful resources are listed in Section 2 References.

Please note that the U.S. TTE SDoC differs from DoCs used under the European R&TTE directive. Among other differences, the U.S. TTE SDoC must be included with the equipment and must be made publicly available. For more information about the R&TTE DoC, see: <http://europa.eu.int/comm/enterprise/rtte/interp.htm>.

7.1 SDoC Content

47CFR Part 68, section 68.324 specifies the minimum required information for a Supplier's Declaration of Conformity. In brief, this includes:

a) Identity and description of the Responsible Party and the product, including the product's model number.

b) A statement that the product conforms with the applicable technical criteria, and a reference to that criteria (for example, document title, number, and revision or publication date).

c) The date and location where the SDoC was issued. (Note: Responsible parties must be located in the U.S.A., according to FCC rule in 47CFR Part 68, section 68.321.)

d) The signature, name, and function of the person making the declaration.

e) If the product has a handset, then also include a statement that it either complies or does not comply with the hearing aid compatibility requirements in Section 68.316 of the FCC rules. If the product is not hearing aid compatible, include a notice in the SDoC that FCC rules prohibit its use in certain locations, and list those locations (see also Section 68.112 of the FCC rules).

f) If the product or device is designed to operate in conjunction with other equipment which can affect compliance, then also show the model number(s) of that equipment. For more on required customer information, see paragraph 8.2 Customer Information.)

g) Any other information required by the ACTA.

7.2 SDoC Form and Appearance

While the FCC did not specify the exact appearance of a Supplier's Declaration of Conformity, responsible parties should refer to the example of a typical SDoC for U.S. TTE approvals shown in Appendix B. This example is based on ISO/IEC Guide 22 and is derived from an earlier example provided by the ACTA.

7.3 Part 68 Certificate from a Telecommunications Certification Body

See Appendix C for an example TCB Certificate.

8. WHAT IS NEEDED TO SHIP THE PRODUCT

8.1 Product Labeling Requirements

TIA/EIA/TSB-168 "Telecommunications - Telephone Terminal Equipment - Labeling Requirements" specifies the labeling requirements for terminal equipment approved by a Telecommunication Certification Body (TCB) or a Supplier's Declaration of Conformity (SDoC) for connection to the telephone network, as of the date of this publication. A copy of this document, or its update, is available from the ACTA at: <http://www.part68.org>.

8.2 Customer Information

The following customer information must be provided to customers with each unit of approved terminal equipment. Please note that there are differences in the information required for consumer products, coin/credit card phones, systems, and digital equipment.

Required or example wordings that meet the requirement are provided in some cases. Text in *[Italics]* denotes information to be provided by the Responsible Party. Wherever possible example wordings that meet the requirement have been provided. Text in *[Italics]* is product or manufacturer specific information.

If the equipment is being approved by the TCB process, a copy of the required customer information must be provided to the TCB. These materials must be identical to what is provided to the customer.

While the information specified here must be provided to the customer, responsible parties have the option of either providing that information in printed form, or in whatever alternative form the user manual is provided. Alternative methods include disk, CD-ROM, or via the Internet. The goal is to make sure the information is readily available to users while minimizing the burden on manufacturers.

It is sometimes the practice to ship product in large quantities (bulk) from the manufacturer to a distributor or reseller without customer instructions. This is acceptable as long as the required information accompanies each unit shipped to the end customer.

8.2.1 General Requirements For All Equipment

a) For equipment approved after July 23, 2001, include the following paragraph:

> This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the *[insert location of the label]* of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

For equipment approved prior to July 23, 2001, include this paragraph:

> This equipment complies with Part 68 of the FCC rules. On the *[insert location of the label]* of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

b) List all applicable Universal Service Order Codes (USOCs) for the equipment. For some types of analog and digital systems, list associated Facility Interface Codes (FIC) and Service Order Codes (SOC). These are required when the customer orders service from the local telephone company. Refer to Alliance for Telecommunications Industry Solutions (ATIS) Technical Report No. 5 for a more extensive listing of jack configurations and their designations (for example, RJ11C), or refer to the Telcordia Network Channel and Channel Interface (NC/NCI™) Decoder for a full listing.

c) State that for single- and two-line equipment that connects to the telephone network via a plug and jack, the plug and jack used with this equipment must comply with FCC Part 68 rules. Use words similar to the following:

> A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

d) Explain the Ringer Equivalence Number (REN) and its use. Note: RENs are associated with loop-start and ground-start ports. Do not use for ear and mouth (E&M) or digital ports. Use words similar to the following:

> The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (for example, 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

e) Provide information on what will happen if this equipment causes harm to the telephone network. Use words similar to the following:

> If this equipment *[insert identity of equipment]* causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

f) Provide information on what will happen if the telephone company makes changes that could affect this equipment. Use words similar to the following:

> The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

g) State what to do if there are problems with this equipment. Do not tell users to return equipment to the dealer, as dealers can change. Use words similar to the following:

If trouble is experienced with this equipment *[insert identity of equipment],* please contact *[company name or service center in the U.S.A. and phone number]* for repair or warranty information. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

h) Explain which repairs, if any, the customer (user) can perform. If there is a section in the general customer instructions that provides detailed information on repairs, a reference to that section is acceptable. If this equipment is of a type that is not intended to be repaired, state that fact in place of any repair instructions.

i) State that this equipment must not be used on party lines. Use words similar to the following:

Connection to party-line service is subject to state tariffs. Contact the state public utility commission, public service commission, or corporation commission for information.

j) Include a caution to users who may have alarm dialing equipment. Use words similar to the following:

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this *[equipment ID]* does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

k) If this equipment uses a telephone handset, state that it is hearing aid compatible. Use words similar to the following:

This equipment is hearing aid compatible.

8.2.2 Customer-Owned Coin/Credit Card Phones

The instructions that are provided with each customer-owned coin or credit card phone must include the following notice:

To comply with state tariffs, the telephone company must be given notification prior to connection. In some states, the state public utility commission, public service commission, or corporation commission must give prior approval of connection.

8.2.3 Data Equipment

For permissive, programmable, and (or) fixed loss loop operation data equipment, in addition to the general requirements for all equipment, information must be provided explaining which jack is associated with each operation.

- Permissive, use RJ11C
- Programmable, use RJ41S and RJ45S
- Fixed Loss Loop, use RJ41S
- Refer to ATIS Technical Report No. 5 for details on these connectors.

For Private (Leased) Line (Analog Data Format) equipment, the type JM8 jack is required. Refer to ATIS Technical Report No. 5 for details on this connector.

For Private (Leased) Line (Digital Format) equipment, in addition to the general requirements for all equipment, certain digital connections require that an encoded analog

content and billing protection affidavit be provided to the telephone company. Customer instructions must contain information on the preparation and submission of the affidavit.

8.2.4 Private (Leased) Lines For Analog Services

The Facility Interface Code (FIC) associated with each private line application represents the type of service that will be provided by the telephone company. The user instructions must contain a detailed list of private line ports and the associated FICs for which the equipment has been approved. In addition, the Service Order Code (SOC) must also be included for analog systems. The SOC indicates the degree of network protection provided by the equipment. For some details on applicable FICs and SOCs refer to Appendix E TTE Information for the ACTA Database.

Note: Some services may not be available in all locations.

8.2.5 Systems

The consumer instructions for systems must contain information on all connectors to the network (switched and private line). This information includes the jack USOCs, FlCs, SOCs, the REN if applicable, the premises wiring information, and any affidavits or written authority authorizations. Furthermore, the US:AAAEQ##TXXX number must be provided so the telephone service provider can ascertain intended modes of operation and verify ports.

8.2.6 Adjuncts - KX and PX Devices

The consumer information must contain notification that when the adjunct is used with a leased system, permission of the owner of the equipment must be obtained for connection of the adjunct because modification of the host system is often required.

Customer instructions for KX type telephones with medium impedance analog message waiting lights and/or line status indicators must contain statements that they can only be connected to host equipment and never directly to the network. The reason is that they do not meet the 5 megohm requirement and most likely will create excessive leakage current when polled by the telephone company's daily automatic loop insulation test equipment. Such events trigger a maintenance action by the telephone company to determine the location of such leakage currents.

8.2.7 OEM Devices

When approved equipment such as couplers or modems are furnished to the original equipment manufacturer (OEM) market (final equipment assemblers), the consumer instructions must contain the following information:

The mounting of the approved unit in the final assembly must be made so that the approved unit is isolated from exposure to any hazardous voltages within the assembly. Adequate separation and restraint of cables and cords must be provided.

The circuitry from the approved unit to the telephone line must be provided in wiring that carries no other circuitry (such as PC or PR leads) unless specifically allowed by the rules. PC board traces carrying tip and ring leads shall have sufficient spacing to avoid surge breakdown.

Information shall be provided as to the power supply source requirements, signal levels, etc., as applicable.

Information shall be provided that when the approved device is enclosed in an assembly, and not readily accessible, that the approval label shall be placed on the exterior of the cabinet for each type of approved device contained therein.

Information shall be provided which states that the final assembler shall provide in the consumer instructions all applicable customer information.

A modular plug or jack shall be provided which complies with TIA/EIA-IS-968 Chapter 6 requirements for dimensions, tolerances, and metallic plating.

8.2.8 Automatic Dialers

The consumer instructions for automatic dialers must contain the following cautionary notice:

> WHEN PROGRAMMING EMERGENCY NUMBERS AND (OR) MAKING TEST CALLS TO EMERGENCY NUMBERS:
>
> 1) Remain on the line and briefly explain to the dispatcher the reason for the call.
>
> 2) Perform such activities in the off-peak hours, such as early morning or late evenings.

8.2.9 Toll Restriction and Least Cost Routing Equipment

The consumer/purchaser/supplier instructions accompanying this equipment and/or software of systems must contain the following notice:

> The software contained in *[insert specific equipment type or features]* to allow user access to the network must be upgraded to recognize newly established network area codes and exchange codes as they are placed into service.
>
> Failure to upgrade the premises systems or peripheral equipment to recognize the new codes as they are established will restrict the customer and the customer's employees from gaining access to the network and to these codes.

8.2.10 Equipment With Direct Inward Dialing (DID)

The consumer/purchaser/supplier instructions accompanying the equipment and/or systems with direct inward dialing (DID) interfaces, must contain the following:

> ALLOWING THIS EQUIPMENT TO BE OPERATED IN SUCH A MANNER AS TO NOT PROVIDE FOR PROPER ANSWER SUPERVISION IS A VIOLATION OF PART 68 OF THE FCC'S RULES
>
> PROPER ANSWER SUPERVISION IS WHEN:
>
> A. This equipment returns answer supervision to the public switched telephone network (PSTN) when DID calls are:
>
> – Answered by the called station
>
> – Answered by the attendant
>
> – Routed to a recorded announcement that can be administered by the customer premises equipment (CPE) user.
>
> – Routed to a dial prompt
>
> B. This equipment returns answer supervision on all DID calls forwarded to the PSTN. Permissible exceptions are:

- A call is unanswered
- A busy tone is received
- A reorder tone is received

8.2.11 Equal Access Requirements

If equipment such as private branch exchanges (PBXs), key systems, or customer-owned coin/credit card telephones is sold to a call aggregator, it must be capable of providing the end user equal access to the carrier of the user's choice. The customer instructions for such equipment must contain the following wording:

> This equipment is capable of providing users access to interstate providers of operator services through the use of access codes. Modification of this equipment by call aggregators to block access dialing codes is a violation of the Telephone Operator Consumers Act of 1990.

8.2.12 Electrical Safety Advisory

Parties responsible for equipment requiring AC power should consider including an advisory notice in their customer information suggesting the customer use a surge arrestor. Telephone companies report that electrical surges, typically lightning transients, are very destructive to customer terminal equipment connected to AC power sources. This has been identified as a major nationwide problem.

8.2.13 Equipment With Fax Capability

The customer information for facsimile (FAX) equipment must contain the following wording:

> The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer, FAX machine, or other electronic device, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.)
>
> In order to program this information into your FAX machine, you should complete the following steps: [I*nsert here instructions for programming the equipment and the required information or the page where it can be found].*

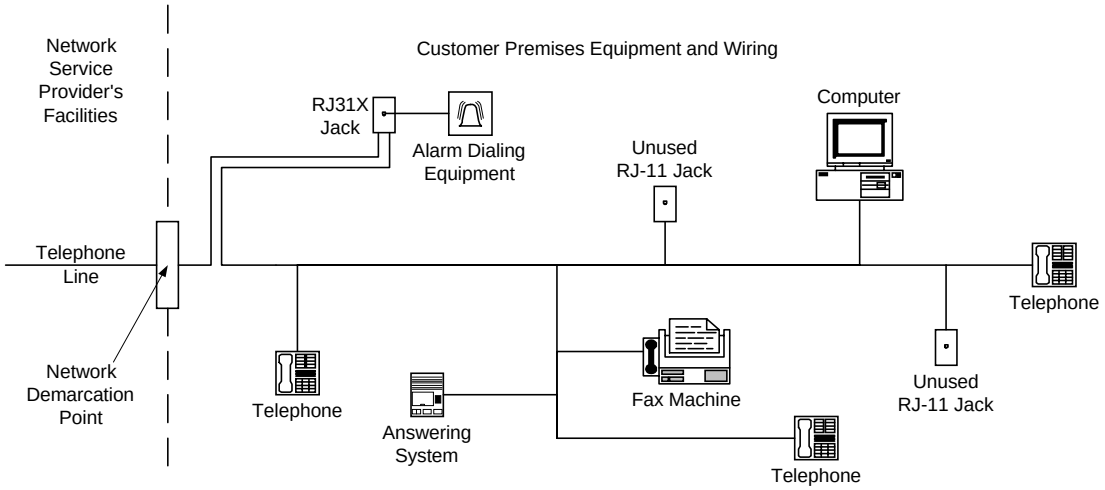
These requirements apply to all FAX machines, and have been extended to all FAX modems manufactured on or after December 13, 1995.

8.2.14 Alarm Dialing Equipment

Alarm dialing equipment (equipment code “AL”), including dialers associated with fire and intrusion protection systems, medical alert systems, equipment failure notification systems, etc., must be connected to a properly installed RJ31X or RJ38X jack to ensure the ability to seize the telephone line in emergency situations. It is a requirement that the customer information accompanying such equipment include the following statement and diagram (where RJ38X may be used in place of RJ31X, if appropriate, and the name and/or model

number of the equipment may be substituted for the term “alarm dialing equipment” in the text and figure):

> Alarm dialing equipment must be able to seize the telephone line and place a call in an emergency situation. It must be able to do this even if other equipment (telephone, answering system, computer modem, etc.) already has the telephone line in use. To do so, alarm dialing equipment must be connected to a properly installed RJ31X jack that is electrically in series with and ahead of all other equipment attached to the same telephone line. Proper installation is depicted in the figure below. If you have any questions concerning these instructions, you should consult your telephone company or a qualified installerabout installing the RJ31X jack and alarm dialing equipment for you.



8.3 Including the SDoC with the Product

FCC rules in 47CFR Section 68.324(c) require that a copy of the SDoC be included in the user manual or provided as a separate document.

In cases where the product or device is designed to operate in conjunction with other equipment which can affect its compliance, then the model number(s) of that equipment is also shown on the SDoC and a copy of the SDoC or a TCB certificate for the approved device must be included in the customer information for each piece of the other equipment that can affect compliance, unless the other equipment itself is approved by SDoC or TCB certification.

8.4 Filing with the ACTA Database

Information on all approved telecom terminal equipment must be included in a database managed by the ACTA (47CFR Section 68.610). This applies to approvals obtained by either the TCB or SDoC methods. Submissions found on initial screening to be incomplete or incorrect will not be entered into the database until corrected. Submissions are subject to review for 30 days after entry.

When new equipment is filed with the ACTA database, the ACTA Secretariat will issue a confirmation notice via e-mail to the TCB and/or Responsible Party as appropriate, typically within 7-10 days. Contact the ACTA Secretariat (ATIS, C/O ACTA Secretariat, 1200 G Street N.W., Suite 500, Washington, DC 20005. The ACTA Web site is at: <http://www.part68.org>

8.4.1 Responsible Party Code

Prior to filing an SDoC or TCB Certificate, the Responsible Party must have an assigned Responsible Party Code (RPC). This is identical to the grantee code previously used by the FCC Common Carrier Bureau, so manufacturers and suppliers that already have a previously assigned grantee code can use it. Otherwise, an RPC must be requested from the ACTA.

The ACTA charges a fee to anyone requesting an RPC. See the ACTA Web site for the current amount of this fee.

8.4.2 Indemnification and Liability Statement

When filing to the ACTA database, include a copy of the Indemnification and Liability Statement shown in Appendix D ACTA Indemnification & Liability Statement.

8.4.3 TCB Filings with ACTA Database

Telecommunication Certification Bodies (TCBs) *must* provide the following to the ACTA for *all* types of filings.

a) **Fee**: As of this writing, the ACTA charges $300 for each database filing. However, this is subject to change. See the ACTA Web site for the current fee.

b) **Copy of Certification**: Submit a copy of the "Grant of Equipment Authorization" issued by the TCB to the Responsible Party.

c) **Product Information:** All relevant information specified in Appendix E TTE Information for the ACTA Database must be submitted. The extent of information provided will depend on the type of filing (original, re-certification, modification, etc.).

d) **List of Authorized Submitters:** Unless previously submitted and on file and still current, a list of personnel authorized to file on behalf of the TCB must be provided. Information must include company name, address, phone number, and name and e-mail address for each individual listed. Additionally, at least one (maximum of three) individual(s) must be identified as a Primary Contact. Primary Contact(s) will be copied on all confirmation notices issued by the ACTA Secretariat, and serve as the company representative(s) for ACTA issues.

e) **Indemnification and Liability Statement:** This statement (from the Responsible Party) must be included with each filing. Refer to the ACTA's "Indemnification and Liability Statement" as shown in Appendix D.

8.4.4 SDoC Filings with the ACTA Database

Responsible parties filing a SDoC *must* provide the following to the ACTA for *all* types of filings.

a) **Fee:** As of this writing, the ACTA charges $300 for each database filing. However, this is subject to change. See the ACTA Web site for the current fee.

b) **Copy of SDoC:** A SDoC must contain the information as outlined below. Refer to Appendix B for an example SDoC.

- The identification and description of the responsible party for the SDoC and the product; including the model number of the product.
- Statement that the terminal equipment conforms with applicable technical requirements, and a reference to the technical requirements.
- Date and place of issue of the declaration.
- Signature, name and function of person making declaration.
- Statement that the handset, if any, complies with 47CFR Section 68.316 of the FCC Rules defining Hearing-Aid Compatibility (HAC), or that it does not comply with that section. Note: a telephone handset which complies with Section 68.316 can be deemed a "hearing aid-compatible telephone" for purposes of Section 68.4.
- For a telephone that is not HAC, as defined in 47CFR Section 68.316, the responsible party shall provide the following in the SDoC: (1) notice that FCC rules prohibit the use of that handset in certain locations; and (2) a list of such locations (see Section 68.112).

c) **Product Information:** All relevant information specified in Appendix E TTE Information for the ACTA Database must be submitted. The extent of information provided will depend on the type of filing (original, re-certification, modification, etc.).

d) **Indemnification and Liability Statement:** This statement must be included with each filing. Refer to the ACTA's "Indemnification and Liability Statement" as shown in Appendix D.

e) **List of Authorized Submitters:** Unless on file and current, a list of personnel authorized to file on behalf of the Responsible Party must be provided.

f) **Copy of Part 68 Test Procedures:** Unless on file and current, a copy of the test procedures used to verify conformity must be submitted. Any deviations from these test procedures must be noted.

8.5 Making an SDoC Publicly Available

For the SDoC method of approval, FCC rules in 47CFR 68.324(e)(3) require the Responsible Party (RP) to make a copy of the SDoC freely available to the general public. This can be accomplished by posting the SDoC on the RP's company Web site, and this must be done in a manner accessible to the disabled community. If the Responsible Party does not have a functional and reliable Web site, then the Responsible Party must work with the ACTA to make a copy available on the ACTA Web site.

The ACTA charges a fee for publishing an SDoC on its Web site. The SDoCs posted by the ACTA can be found at: <http://www.part68.org/SDOCview.htm>.

Note: The FCC rules stipulate that filing the SDoC with the ACTA is not the same as making the SDoC publicly available. The distinction exists because there are two distinct FCC rules that apply. Providing a copy of the SDoC to the ACTA is required by FCC rule section 68.324(e)(2), while the requirement that the RP make a copy of the SDoC publicly available is in section 68.324(e)(3). In this latter requirement, the FCC envisioned that if the RP didn't

have a reliable and accessible Web site on which to publish the SDoC, they could arrange with the ACTA to publish it for them. While filing the SDoC with the ACTA makes it public because most of the ACTA files are open to the public, SDoCs filed with the ACTA are not automatically placed on the ACTA Web site. Consequently, it is important that responsible parties also deal with these two requirements separately. Filing an SDoC with the ACTA will not automatically meet the FCC requirement for publishing the SDoC for public viewing.

If the RP does not have a reliable and accessible Web site then it is important that the Indemnification and Liability Statement (see Appendix D) that must accompany each submission to the ACTA contain the optional paragraph that reads :

> "In accordance with FCC Rules 47CFR Section 68.324 (e)(3) *[Responsible Party]* hereby informs the ACTA that a copy of the SDoC is not available to the general public and accessible to the disabled community on a functional and reliable Web site that it maintains."

8.6 Importation and Customs Considerations

8.6.1 Importation for Test and Evaluation

Up to 35 devices may enter the U.S. without a Part 68 approval for purposes such as testing, demonstrations, etc. Such devices must be marked with the words **"For Test and Evaluation. Not For Sale"**. These devices may be shown at trade shows, but may not be offered for sale or connected to the telephone network without proper approval or a field trial authorization from the serving telephone company.

Note that other parts of 47CFR may also require different documentation to accompany products being imported into the U.S. for test and evaluation in addition to those required above.

8.6.2 Importation for Sale

As described in paragraph 5.1.1 Responsible Party under the SDoC Method, the RP must be resident in the U.S.

The product must also be properly labeled (see paragraph 8.1 Product Labeling Requirements), and must contain the required customer information in the owner's, user's, and/or installation manual that is shipped with the product (see paragraph 8.2 Customer Information).

A copy of the SDoC must accompany the product, either as a separate document, or contained in the manual shipped with the product.

Note: To the extent possible, the importer should make it easy for the customs personnel to find the correct documentation for the product.

8.6.3 Country of Origin Requirements

Prior to the FCC Report & Order 00-400, it was required by FCC rules in 47CFR Part 68 to show the country of origin on the label of all approved TTE. However, this requirement was designed to meet requirements of other U.S. Federal agencies rather than a specific FCC need. The Report & Order deleted this specific requirement, replacing it with the simpler requirement that "Labeling shall meet the requirements of the [FCC] and the U.S. Customs Service…" (see 47CFR Section 68.612).

While placing the country of origin on the equipment label may no longer be an FCC requirement, it still may be a requirement of other U.S. Federal agencies. However, this is now outside the scope of this document. The reader may find it helpful to review the material at these Web sites:

a) According to U.S. Custom Service rules, every article of foreign origin entering the U.S. must be labeled with the country of origin. U.S. Customs commercial importing procedures and requirements concerning country of origin marking are summarized at: <http://www.customs.gov/imp-exp2/import/marking.htm>.

b) A review of the use of U.S. origin claims (Made in U.S.A.) is available from the U.S. Federal Trade Commission at: <http://www.ftc.gov/opp/usa.htm>.

9. SPECIAL CASE - TTE COMPONENT APPROVAL

Component approval is intended for a product that will be combined with other approved telephony components and possibly host equipment, to form a complete telephony function.

A product may receive approval as a component, by either the TCB or SDoC process, without its being tested with every possible combination of other components. This is possible because responsibility for controlling each harms' technical requirement is contained in just one component of the system (with the exception addressed in paragraph 9.8 Through Transmission Paths).

An example of component approval is where a generic PC host, a multi-circuit PSTN interface card, and a voicemail card are used to create a custom voicemail system. In these cases, the public switched telephone network (PSTN) interface and the voicemail card must be approved, but the PC and final system need not be approved.

9.1 Definitions

9.1.1 Complete Telephony Function

A complete telephony function addresses all Part 68 compliance requirements. No other device or assembly (that is, component) is required. For example, a single-line telephone, answering machine, or a PBX provide complete telephony function. However, a network interface card of a PBX provides a partial telephony function as it requires interaction with a host device and one or more other interface cards to complete the telephony function (for example, a through path from a station set to the PSTN).

9.1.2 Component Approval, Host-Independent

A host-independent device or assembly has partial telephony functionality and is intended for use with a generic model or family of host equipment (PCs from any manufacturer, for example).

Examples of possible devices include PC-mounted:

- Network interface card
- Voicemail card
- Switch matrix card

9.1.3 Component Approval, Host-Specific

A device or assembly has partial telephony functionality and is intended for use with a specific model or family of host equipment as defined by the manufacturer (for example, company ABC, models X, Y, and Z). All such components and hosts are made by, or under license of, a single Responsible Party.

Examples of possible devices include:

- PBX telephone with proprietary interfaces
- Voicemail system with proprietary interfaces

- PBX network interface card
- VoIP phone for connection behind network gateways

9.1.4 Normal Approval

Approval of a device or assembly with a complete telephony function is the type of approval that most products receive.

Examples of devices include:

- Telephone intended for direct PSTN connection
- PBX
- Key System
- Stand-alone modem
- Answering machine
- Fax machine
- Voicemail system with network interface

9.2 Administrative Requirements For Component Certification

9.2.1 Demonstration of Compliance

All component approvals must include all relevant information required by all sections of this guide.

The component must meet all of the relevant requirements for the intended use of the device. For example, if the device has a loop start interface, then it must meet all applicable rules for loop start.

9.2.2 Device Description

The test report must include a brief description of the device, in addition to other information that may be required. Such a description must include:

- A definition of the host type (that is, host independent, host-specific or both; see paragraph 9.11 Mixing of Host Equipment Types)
- A list of specific host models (if being approved as a host-specific type of component device), alternatively the name of the proprietary bus being used in the specific hosts. Provide a brief description of how a component is operated via such a proprietary bus.
- A list of intended network interfaces, when known (see paragraph 9.4 General Requirements).

9.2.3 Equipment Evaluation

The test report must include a complete and normal evaluation of the device, plus:

- A list of parameters affecting compliance that are under customer control, and how non-compliance of the customer-connected product is controlled;

– Documentation of any non-standard test methods or equipment setups which may be required to properly evaluate the component for compliance.

9.2.4 ACTA Database Filing

When filing the component to the ACTA database, note the following exceptions.

9.2.4.1 Equipment Code

Use the appropriate equipment code for each component:

– CN - for components with a network interface.

– CE - for components without a network interface.

9.2.4.2 Network Signaling Code

If the component generates DTMF, dial pulsing, or other signals which could be passed to the PSTN via this or other component devices, use the applicable code (T, R, or E), otherwise use N.

9.2.4.3 Ringer Equivalence Number (REN)

The REN for a component is determined in the same way as complete systems, as long as the requirements of section 9.12 below are met. If a device has no effect on REN (that is, it does not have a loop or ground start interface), then use N/A. For an explanation of REN see section 8.2.1 d).

9.3 Compliance Evaluation Process

Do the following to determine if equipment can be approved using the component approval process:

a) Evaluate the component and the customer instructions to determine if the device is host independent, host specific, or both. (For the both case, see paragraph 9.11 Mixing of Host Equipment Types.)

b) Determine what part of a telephony function the component performs.

c) Determine which compliance parameters the component should control. These parameters shall be completely controlled by the component (that is, not shared between this and another component(s) not originally supplied).

d) Verify compliance to Part 68 using the guidelines supplied here. This may require non-standard testing methods. Clearly document any non-standard methods in the test report.

e) Verify customer information and product labeling are in accordance with the requirements and those shown below in paragraphs 9.13 Customer Documentation and 9.14 Product Labeling.

f) Prepare the test report and supporting documentation noting the special instructions stated in paragraph 9.2 Administrative Requirements For Component Certification.

9.4 General Requirements

All requirements applicable to traditional terminal equipment are applicable to component equipment. For example, a PC multi-circuit PSTN interface card still must comply with the requirements for longitudinal balance, impedance, hazardous voltages, etc.

NOTE: If non-standard methods are needed to perform this testing, clearly document them in the test report.

Determine a requirement carefully. The sections below highlight these special areas and provide guidance in applying the requirements to a component. If a potential component fits one of the equipment types described below, it must, on its own, demonstrate compliance with the listed criteria. The device cannot rely on another device or product (hardware or software) not included with the original product to comply with the listed requirement(s). If a device does rely on another device or product (hardware or software) to comply, then it is not eligible for component certification.

When integrated with other such devices, some types of components may or may not detect the interface used when connecting to the PSTN. Some of the requirements given below are applicable only to specific interface types. Therefore:

- If the interface to the PSTN is unknown, then the interface-specific requirements always apply.
- If the interface to the PSTN is known, then the interface-specific requirements apply only when connected to those interfaces.

Indicate whether the PSTN interface is known or unknown in the test report and list known interfaces.

9.4.1 Guide to Applying Requirements

Below is a diagram and a table to assist in determining which requirements apply to some example components. Note that these are for devices with no internal DTMF tones or tone sources and are intended to be a guide. Other components, configurations, or requirements may exist.

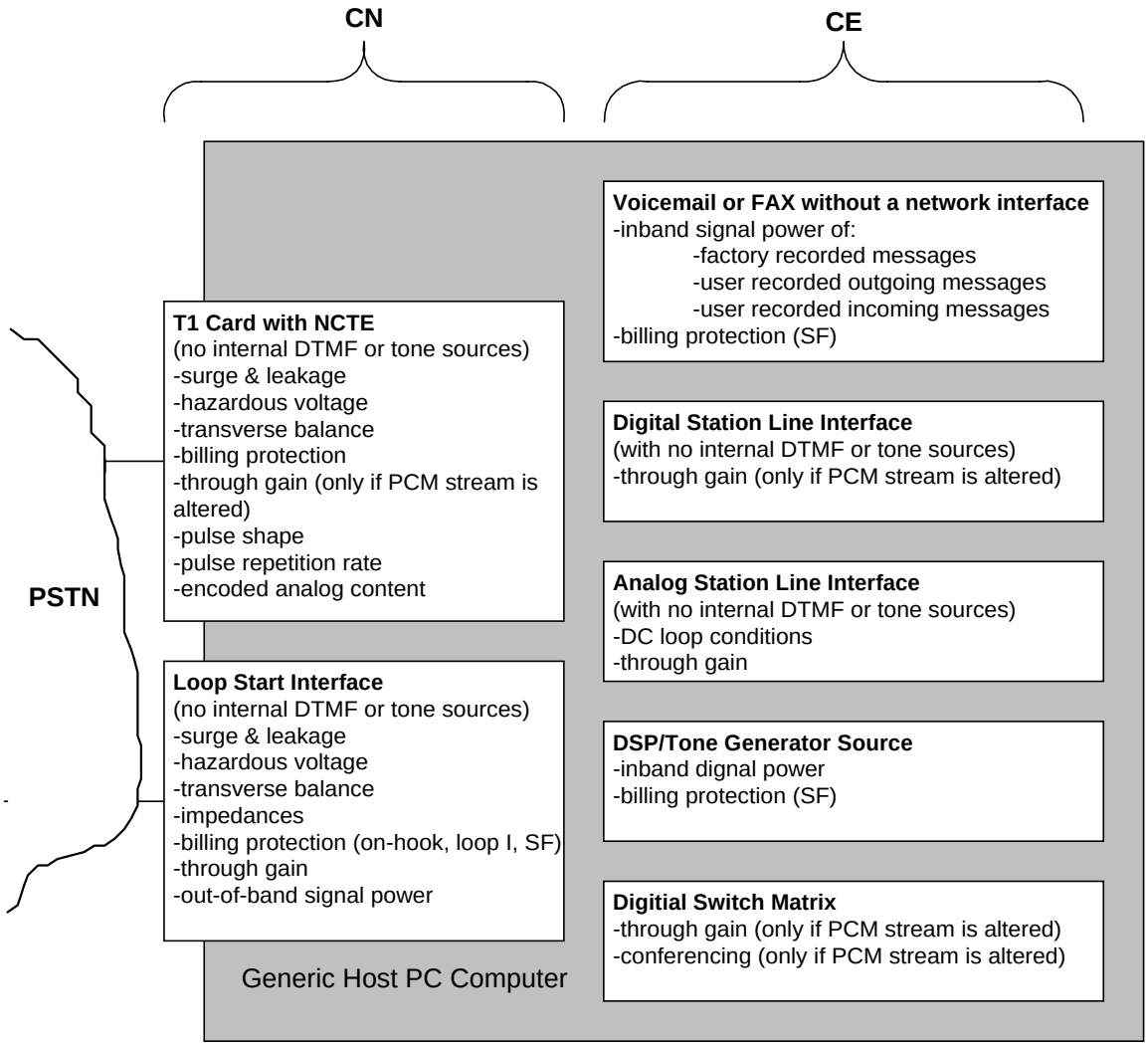


Figure 9-1 – Component certification examples for devices with no internal tone sources.

Notes:

1. The boxes show functional blocks, and one or more of these may exist in a product.
2. Each block could receive an individual approval number.

Below is a list of general requirements versus component equipment features to provide some additional guidance. If a component has more than one of the features listed, then the requirements identified for all available features shall be tested.

For a more detailed matrix of Part 68 requirements vs. network interfaces refer to the latest revision of testing methodology document TIA/EIA/TSB31-B.

Table 9-1. General Requirements vs. Component Features

Feature of Component	In-Band & Encoded Analog Signal Power	Billing Protection & Signaling Interference	Surge, Leakage, Hazardous Voltage	Out Of Band Signal Power	Through Path	Transverse Balance	Impedances (on hook)
Loop St	**X**	**X**	**X**	**X(2)**	**X(1)**	**X**	**X**
Gnd St	**X**	**X**	**X**	**X(2)**	**X(1)**	**X**	**X**
OPS	**X**	**X**	**X**	**X(2)**	**X(1)**	**X**	**X**
E&M	**X**	**X**	**X**	**X(2)**	**X(1)**	**X**	**X**
DID	**X**	**X**	**X**	**X(2)**	**X(1)**	**X**	**X**
Station	**X**			**X**	**X(1)**		
T1 (DD)	**X**		**X**		**X(1)**	**X**	
Subrate	**X**		**X**		**X(1)**	**X**	
PRI (DD)	**X**		**X**		**X(1)**	**X**	
BRI (DD)	**X**		**X**		**X(1)**	**X**	
PSDS	**X**		**X**		**X(1)**	**X**	
DTMF	**X**	**X**		**X**			
Messages	**X**	**X**		**X**			
Tones	**X**	**X**		**X**			
Music Port	**X**			**X**	**X(1)**		
Switch Matrix					**X**		

Notes:

1) Applies to these ports when the component has a through path to other ports (for example, another network port, MVIP, SCSA, or station equipment).
2) Assumes digital architecture components.

9.4.2 General Notes

The following guidelines are to be used by the testing facility to determine compliance of components not otherwise covered above.

- Compliance with the leakage current/hazardous voltage requirements in TIA/EIA/IS-968, sections 4.1 - 4.4 is the sole responsibility of the network interface circuitry.
- Non-live voice signals generated toward the PSTN by the device must exit compliant with the absolute signal power requirements.
- Call duration must comply with requirements of TIA/EIA/IS-968 for data equipment.

- On-hook signal must comply with requirements of TIA/EIA/IS-968 when it is in the mode that is equivalent to an on-hook condition.
- Any analog-analog through-path must not contain any net amplification, otherwise signals from component devices compliant with TIA/EIA/IS-968 may exceed these requirements upon reaching the PSTN.
- Any analog-digital or digital-digital through-path must be designed in compliance with published documents for the non-PSTN digital interface.
- Any signal generated by the device toward the PSTN must exit compliant with the Signaling Interference requirements of TIA/EIA/IS-968.
- Any device which contains a loop start or ground start interface, or both, shall control all parameters which determine the Ringer Equivalence Number (REN).

Devices that do not comply with the requirements described here shall not receive approval, but options still exist:

- Redesign the product to become compliant with these requirements.
- Sell the product without modification or approval, but purchasers of such product cannot use it in conjunction with other approved or unapproved components unless the resulting assembled equipment obtains Part 68 approval of the assembly as a single product.

9.5 Leakage Current and Hazardous Voltage

Network interface components that would have been subjected to the hazardous voltage requirements of TIA/EIA/IS-968 still must comply with these requirements. Such components must provide the required isolation/protection totally within the device. For example, when testing for leakage current compliance of a particular PC network interface card, all connections to the host equipment or other devices, not covered by the test point definitions, shall be classified as connection point (c) (specifically 1000 volts ac from tip and ring (T&R) to edge connector and MVIP connector pins as of this writing). This ensures sufficient dielectric isolation at the component.

9.6 In-band Signal Power

9.6.1 Analog, Host-Independent

Components that generate non-live voice signals (for example, signals that are recorded or system generated) must demonstrate the following:

- Compliance with absolute signal power requirements of TIA/EIA/IS-968 for all signals sourced by the component.
- Compliance with the call duration requirements of TIA/EIA/IS-968 for data equipment.
- Compliance with the on-hook signal requirements of TIA/EIA/IS-968 when the equipment under test (EUT) is in a mode that is equivalent to an on-hook condition.
- Compliance with the signaling interference requirements of TIA/EIA/IS-968 for all signals sourced by the component.

Such devices could have a network interface (for example, PC analog loop start line card with built-in call progress tone generator), or could generate only in-band non-live signals (for example, a recorded announcement device).

9.6.2 Digital, Host-Independent

Component devices that contain an analog-to-digital converter, or generate signals directly in digital form but are intended for eventual conversion into voiceband signals shall, for such signals, demonstrate compliance with:

- The encoded analog content requirements of TIA/EIA/IS-968.
- The signaling interference requirements of TIA/EIA/IS-968.
- The on-hook signal requirements of TIA/EIA/IS-968.
- The signaling duration requirements of TIA/EIA/IS-968.

Such devices could receive such signals from a non-network interface (for example a PC analog station line card), or could generate digital signals directly (such as a PC digital signal processing [DSP] card).

9.6.3 Analog and Digital, Host-Specific

Component devices generating non-live voice signals must comply with the absolute signal power requirements of TIA/EIA/IS-968 for all signals sourced by the EUT when tested at the network interface(s) of the host equipment presenting the highest level of such signals.

9.7 Out-of-band Signal Power

9.7.1 Host-Independent

The out-of-band noise requirements only apply to those components with analog connections to the PSTN. These requirements do not apply to components having digital architecture.

9.7.2 Host-Specific

Components shall comply with the out-of-band signal power requirements of TIA/EIA/IS-968 when tested with the host equipment that presents the worst (highest signal level) noise environment.

9.8 Through Transmission Paths

9.8.1 Analog-to-Analog, Host-Independent

Components forming an analog-to-analog through transmission path would have traditionally been required to comply with the through path requirements of TIA/EIA/IS-968. However, components that can’t demonstrate compliance because the entire through path is not provided by the device, must provide a written attestation by the Responsible Party that any through-path within its equipment has no gain.

Such devices could contain either (a) a network interface (for example, PC loop start interface card), or (b) could contain only a through path (for example, a PC analog switch

matrix card), or (c) could contain only a non-network interface (such as a PC station line card).

9.8.2 Analog-to-Digital, Host-Independent

Components that form an analog-to-digital (or digital-to-analog) through transmission path (that contain an analog-to-digital converter) would have traditionally been required to comply with the through path requirements of TIA/EIA/IS-968. However, filings for components that cannot demonstrate compliance because the entire through path is not provided by the device, must include a written attestation by the Responsible Party that the device performs this conversion in accordance with the applicable ACTA technical criteria for the non-PSTN interface(s).

Such components could contain only non-network interfaces (such as an analog station line card with a digital connection to other cards).

9.8.3 Digital-to-Digital, Host-Independent

Components that form a digital-to-digital through transmission path would have traditionally been required to comply with the through path requirements of TIA/EIA/IS-968. However, filings for components that cannot demonstrate compliance, as the remainder of the through path is not provided by the device, must include an attestation by the Responsible Party that the component complies with the ACTA technical criteria for the non-PSTN interface(s).

Such components could contain either (a) a network interface (for example, PC T1 interface card), or (b) only a through path (for example, PC digital switch matrix card), or (c) only a non-network interface (for example, a PC station digital line card).

9.8.4 Analog and Digital, Host-Specific

Components forming part of any through transmission path must comply with the absolute signal power requirements of TIA/EIA/IS-968 for valid combinations of the component when tested with the host equipment that presents the highest level of through gain.

9.9 Customer Control of Compliance Parameters

Components providing customer access to controls (hardware or software) which could make it operate in a non-compliant manner (such settings may be required for non-PSTN applications) shall be set to a value that makes the EUT compliant with Part 68 if such controls can be initially set by the manufacturer.

Such a device could be a phone number sequencing card with a customer-determined final application. To be compliant, the manufacturer must initially set the number of redial attempts to comply with TIA/EIA/IS-968.

Note: Components containing a direct inward dialing (DID) interface must return answer supervision in compliance with the requirements of TIA/EIA/IS-968 (that is, in a manner which cannot be readily altered by software control or other user controlled media). For example, a DID interface card is not compliant with the signaling requirements without specific software. Such a product could be approved if the software that controls compliance is supplied with the product and includes instructions on how to use it properly.

9.10 Identification of Host Equipment

For any component used in conjunction with host equipment, the documentation (for example, a part of test report or exhibits) must state whether the device can be used in conjunction with a generic host (such as a PC from any manufacturer) or a specific host (such as a PBX Model XYZ from company ABC). Customer information shall also include this information.

For example:

- Host-independent devices could be telephony cards approved for operation with any desktop computer (for example, IBM PC or equivalent).
- Host-specific devices could be a proprietary telephone set intended for operation with company ABC's models XYZ and 123.

9.11 Mixing of Host Equipment Types

A component may be mixed, that is, both host-independent and host-specific at the same time. (Example: A PC-based card with a proprietary station interface to a specific PBX, where interconnection to other components is possible.) In these situations, the compliance evaluation must be made very carefully. The component must assure that the requirements pertaining to all hosts are met.

If a through path exists from other components through the independent host to the specific host equipment, the device can be approved as a component provided that all other requirements are met, and:

- The host equipment and the host-specific component fit the definition for host-specific components in paragraph 9.1.3 Component Approval, Host-Specific.
- The Responsible Party for the host-specific equipment provides the applicable attestation(s) from the Through Transmission Paths, paragraph 9.8 (more than one attestation may be necessary depending on the through paths possible from the combination of the specific host and component device interfaces).
- The customer instruction requirements in Customer Documentation, paragraph 9.13 are appropriately adjusted to include the indication of both the specific and generic host types.

9.12 Control of Ringer Equivalence Number (REN)

Any device which contains a loop-start or ground-start interface shall control all parameters which determine the Ringer Equivalence Number (REN). Specifically, the ringer load presented to the PSTN by a loop- or ground-start interface shall be completely defined by that interface. If a device does rely on another device or product (hardware or software) not supplied by the Responsible Party with the product to address all the aspects of the REN, then it is not eligible for component approval. For an explanation of REN see section 8.2.1 d).

9.13 Customer Documentation

All customer information requirements are applicable to components. However, there are additional requirements for devices approved under the component approval program.

9.13.1 Approved Component Devices, General

The following statement must be prominently displayed in the customer information for all approved components:

"This equipment is approved under FCC Part 68 as a component device for use with *[list host specifics, for example company ABC models X, Y, and Z, or describe equipment (for example, any generic PC)]*. In order for approval of this product to be valid, all other products used in conjunction with this product must also be FCC Part 68 approved as a component device for use with *[these hosts/this host]*. If any of these components are not approved, then you, as owner or user, are required to obtain FCC Part 68 approval of the assembled equipment prior to connection to the telephone network. Part 68 approval requires that you maintain this approval over time and as such you are responsible for the following:

- Any component added to your equipment, whether it bears component approval or not, will require a Part 68 compliance evaluation. You may need to test, re-approve, and make a filing to the ACTA database before that new component can be used;
- Any modification/update made to any approved component within your equipment will require a Part 68 compliance evaluation. The modifying entity becomes the Responsible Party for the modified equipment. The Responsible Party will need to determine if a new test, approval, and filing to the ACTA database is required before that modified component can be connected to the network;
- If the Responsible Party continues to produce this component that party is required to comply with all continuing compliance requirements under FCC rules.

If the telephone service provider requests the approval number and REN of the device you are connecting, supply the FCC registration or 'US' numbers for all components and host devices that have a direct PSTN connection and the highest REN.

If at any time the ownership of this component device is transferred to someone else (whether independently or as part of a system), supply this manual to the new owner."

9.13.2 Approved Component Devices, Host-Independent

The following statement must be included in a prominent location with the customer information for approved components used with host-independent equipment:

"Therefore only approved devices bearing the 'CN' or 'CE' equipment code as part of the 'US' approval number may be used with this equipment. To determine if your particular component is appropriately approved, look for the FCC registration or 'US' approval number on all components and ensure that the equipment code '-CN-' or '-CE-' is part of that number. Refer to the 'US' approval number on this product as an example."

9.13.3 Approved Component Devices, Host-Specific

The following statement must be included in a prominent location with the customer information for approved components used with host-specific equipment:

> "Therefore only approved devices bearing the 'CN' or 'CE' equipment code as part of the 'US' approval number may be used with this equipment. (NOTE: The host equipment used in conjunction with this product may bear a 'US' approval or an FCC registration number with other than the 'CN' or 'CE' equipment code.) When determining if your particular component device is appropriately approved, look for the 'US' approval or FCC registration number on all components and ensure that the classification code '-CN-' or '-CE-' is part of that number. Refer to the 'US' approval number on this product as an example."

9.13.4 Approved Component Devices, Hearing Aid Compatible

If a component device provides a connection for acoustic devices (such as a handset jack), even if they are not supplied with the component, the following statement must be prominently displayed in the customer documentation:

> "Use only handsets or other acoustic devices with this equipment that are compliant with the hearing aid compatibility requirements of FCC Part 68."

9.13.5 Approved Component Devices, Customer Control

Components that allow customer control by either hardware or software which could make the equipment operate in a non-compliant manner (such settings may be required for non-PSTN applications) shall contain in its customer information the following information:

- Clear instructions indicating which controls could cause Part 68 non-compliance.
- The control limits to maintain compliance.
- A statement that when the product is connected to the PSTN, these controls are to be set to a value within these compliance limits.

If this information is not located with the other Part 68 statements, a reference to the location of this information shall be included with the Part 68 statements.

9.13.6 Approved Component Devices With Digital Through Paths

Devices in the ACTA database, which must provide attestations in accordance with either paragraphs 9.8.2 Analog-to-Digital, Host-Independent or 9.8.3 Digital-to-Digital, Host-Independent of this guide, shall identify in their customer information which published requirements their non-PSTN digital interface(s) are designed to meet. For example:

> "The *[interface identification]* interface is designed to meet the requirements found in the following published documents:
>
> [document 1 identification]
>
> [document 2 identification]
>
> Ensure that component devices using this interface are also designed to meet these requirements."

9.13.7 Unapproved Component Devices

The following statement must be prominently displayed in customer documentation for devices that are not approved components:

> "IMPORTANT NOTICE: Before this equipment may be used in any application that makes a direct connection to the Public Switched Telephone Network, Federal Communications Commission (FCC) Part 68 approval shall be obtained for the connecting device, either as a component or as a complete system."

9.14 Product Labeling

All approved component devices must be labeled as described in TIA/EIA/TSB-168.

The required labeling can be placed in any convenient but readily accessible location on component devices. For example, it can be placed on the printed circuit board of a plug-in card used with PCs or those printed circuit cards plugged into card shelves of host equipment.

Where it is not desirable or feasible to display the label code on the component, an alternative method of positively identifying the equipment may be used if approved by the Administrative Council for Terminal Attachment (ACTA).

10. DISABILITY ISSUES

10.1 Hearing Aid Compatibility (HAC), Magnetic Coupling

In accordance with 47CFR Part 68, section 68.4, all telephones imported or manufactured in the United States after August 16, 1991 must magnetically couple with hearing aids as defined in the FCC rules 47CFR Part 68, section 68.316. Documentation must be provided to the FCC for secure devices. Public mobile service and private radio service telephones are exempt from this requirement.

10.2 Hearing Aid Compatibility, Volume Control

In accordance with 47CFR Part 68, section 68.6, all telephones imported to or manufactured in the United States after January 1, 2000 must provide an amplified receive volume control as defined in FCC rules 47CFR Part 68, section 68.317. Documentation must be provided to the FCC for secure devices. Public mobile service and private radio service telephones are exempt from this requirement.

10.3 Carriers Supplying Equipment To The Disabled

FCC rules in 47CFR Part 64, section 64.606, Furnishing related customer premises equipment, allows telephone companies to supply terminal equipment to individuals with disabilities. Subpart F of Part 64 discusses telecommunications customer premises equipment and persons with disabilities.

10.4 Disability Provisions of 1996 Telecommunications Act

FCC rules in 47CFR Parts 6 and 7 (implementing section 255 of the Telecommunications Act of 1996) require that manufacturers of telecommunications equipment and telecommunications service providers consider accessibility and usability by the disabled in the design of new telecom customer premises equipment and services. Accessibility features must be incorporated if readily achievable. If they are not readily achievable, then the equipment and services must be made compatible with existing assistive devices and services, if readily achievable. Companies should document their accessibility analyses and any steps taken, and archive this information for reference should it become necessary to show compliance later.

On November 19, 1999, the new FCC Part 6 and 7 disabled access rules were published in the Federal Register (FR Doc 99-3009). This document should be used for the official rules. The FCC rationale for these rules and other information are in the Report & Order, FCC 99-181.

10.5 Additional Information about Telecom and Disabled Accessibility

For general information about accessibility of telecommunications equipment and services by persons with disabilities, refer to "Consumer Information" from the FCC's main Web site. Enforcement of FCC disabled accessibility rules in Parts 6 and 7 is the responsibility of the

Enforcement Bureau. All are available from links at the FCC's main Web site: <http://www.fcc.gov>.

Information about Web site accessibility design is available from the World Wide Web Consortium (W3C) "Web Accessibility Initiative" Web site at: http://www.w3.org/WAI/.

The Architectural and Transportation Barriers Compliance Board (also known as the Access Board) Web site has a detailed list of telecom accessibility resources and information about Section 255. The Access Board Web site is at: http://www.access-board.gov/.

The TIA has a helpful equipment design guide and other useful references available at: http://www.tiaonline.org/access/.

11. HOW TO HANDLE PRODUCT CHANGES AND MODIFICATIONS

The Responsible Party is obligated to assure that approved TTE continues to comply with all applicable requirements when product changes or modifications occur. Furthermore, if there is a change to any information shown on the SDoC or TCB Certificate, or in the ACTA database contents, up-to-date information must be filed with the ACTA, and the TCB if appropriate (see below).

TIA/EIA/IS-968 (adopted by ACTA) in its Scope (1.1) specifies that all modified equipment must comply with the requirements in effect at the time of the modification, not necessarily those requirements in effect at the time of approval.

11.1 Changes to Products with SDoC Approval

The following is excerpted from the FCC rules 47CFR:

> ***Section 68.348 - Changes in equipment and circuitry subject to a Supplier's Declaration of Conformity.***
>
> *(a) No change shall be made in terminal equipment or protective circuitry that would result in any material change in the information contained in the Supplier's Declaration of Conformity Statement furnished to users.*
>
> *(b) Any other changes in terminal equipment or protective circuitry which is subject to an effective Supplier's Declaration of Conformity shall be made only by the responsible party or an authorized agent thereof, and the responsible party will remain responsible for the performance of such changes.*

The above statement divides changes or modifications to an SDoC-approved product into either:

- Those that affect information in the SDoC (essentially, changes that would modify the information provided to ACTA on the submission form for ACTA database input). These changes will require ACTA notification.
- Those that do **not** affect this information would not require another filing with the ACTA.

If any product modifications affect technical compliance of the equipment, then a retest is required.

11.1.1 Product Changes Affecting the ACTA Database Information

Changes to the following TTE information/characteristics require notification to the ACTA:

- Product classification (equipment code)
- Network address signaling code
- Facility interface codes (FIC)
- Answer supervision codes
- Ringer Equivalence Number (REN)
- Repetitive dialing features or status

- Hearing aid compatibility
- Network ports or USOC Jacks (adding or deleting)
- Trade names or model numbers, including adding new ones not listed in the original filing (this would be a 'Notice Filing')
- Any item in the ancillary equipment section of the ACTA database on the product

11.1.2 Product Changes NOT Affecting the ACTA Database Information

Examples of these changes include:

- Schematic diagram or component values that do not have an effect on REN
- Changes in signal power levels
- Mechanical layout, including but not limited to printed circuit board changes
- Software changes that might affect electrical characteristics
- Power supply changes
- Simple cosmetic changes that only affect appearance

Even though these changes do not require filing with the ACTA, a retest of the product is required if they affect product compliance. Refer to the sections of this Guide that discuss test reports for more details.

11.1.3 Re-approval under TCB Certification

If desired, the Responsible Party of a product previously approved by an SDoC may become the Grantee for the same product (whether or not the product is changed) under a new TCB Certification. All the TCB rules and procedures then apply to the product.

The product may keep its original approval number even though its approval status changes from SDoC to certification by TCB.

The change from approval by SDoC to approval by TCB must be filed with the ACTA even if there were no changes, or if changes to the product do not require changing any other information supplied to the ACTA.

11.2 Changes to Products with TCB Certification

If the product was approved by a TCB and the Responsible Party wants to continue to have the product approved by the TCB after making changes to the product, then the TCB may require a modification filing be submitted to them.

11.2.1 Modification filing with a TCB

In its Report and Order FCC 00-400 released on 21 December 2000, the FCC deleted all the information in 47CFR section 68.214 pertaining to changes made to approved equipment. The rules regarding the type of changes that may or may not be made under modification or notification filings with a TCB are therefore left up to the ACTA and the TCBs.

When a Responsible Party modifies a TCB certified product after the certification was granted, the TCB will require that the RP notify it when these changes are made:

- Any trade or model name changes.
- Any software or circuit changes that may affect compliance.
- Any changes in the certification envelope. This is the equipment that was certified, which includes characteristics of all items or ancillary equipment, if any, that affect compliance with the requirements. Ancillary equipment is described in Item 19 of Appendix E TTE Information for the ACTA Database.

11.2.2 Re-approval under SDoC

If desired, the Grantee of a product previously approved by a TCB may become the Responsible Party for the same product (whether or not the product is changed) under a new SDoC. All the SDoC rules and procedures then apply to the changed product.

The product may keep its approval number even though its approval status changes from certification by TCB to approval by SDoC.

The change from approval by TCB to approval by SDoC must be filed with the ACTA even if there were no changes, or if changes to the product do not require changing any other information supplied to the ACTA.

11.3 Changes to Products Previously Approved by the FCC

Since the FCC is no longer accepting submissions for approval of terminal equipment, changes to equipment previously approved by the FCC must be treated the same as changes to equipment approved by either the SDoC or TCB process. Guidance is provided in paragraph 11.1 Changes to Products with SDoC Approval (for SDoC) and paragraph 11.2 Changes to Products with TCB Certification (for TCB)..

12. WAIVER INFORMATION

Waivers are sometimes employed in special-case situations where it is either necessary, usually on public interest grounds, to waive or not apply some specific rule or procedure. Typically, this is not done in an arbitrary or capricious manner, nor is it designed as a path to circumvent regulations. However, in some cases the intent of a rule or procedure does not apply, or some other good reason for a waiver exists.

For example, a rule may have been created that applies to some technology, but unforeseen advances in technology or changes to underlying assumptions may occur. A new technology may come into existence that clearly violates some rule, but its implementation may clearly be in the public interest and a formal rule change may not be appropriate for some reason. In cases such as this, a well-defined waiver process might be created that allows the promoter of a new technology to implement it into products, and deploy those products to the marketplace, once they meet a set of waiver criteria.

This chapter provides an overview of waivers and guidance to those who wish to pursue a waiver. However, no guarantees are given or implied; waiver petitions are not routinely approved. On the contrary, the burden of justification is on the petitioner, the proceedings are often lengthy, and there is no assumption of an outcome favoring the applicant.

12.1 Waiver of ACTA-Approved Technical Criteria or Administrative Procedures

FCC rules 47CFR Part 68 provide no process for seeking a waiver to ACTA-approved TTE technical criteria or administrative procedures by which someone may petition for a waiver to FCC rules.

With Part 68 Report & Order (FCC 00-400, in Docket 99-216), the FCC directed the formation of the private-sector Administrative Council for Terminal Attachment (ACTA). The FCC delegated to this council the responsibility of acting as a publishing clearing-house for TTE technical criteria developed by ANSI-accredited standards development organizations (SDO) and for developing certain administrative processes related to the TTE approval process. However, the ACTA does not engage in standards development, policymaking, or dispute resolution itself (R&O paragraph 55). Consequently, entertaining requests for waivers to TTE technical criteria is outside of its scope.

The FCC envisioned that by making the TTE technical criteria an industry responsibility, necessary changes to these criteria could be handled more quickly than when these technical criteria were part of its rules. Any SDO accredited by ANSI for the creation of standards under the Organization or Standards Committee methodmay submit technical criteria to the ACTA for approval under certain conditions spelled out in 47CFR section 68.604. ACTA is required to publish proposed new technical criteria (which then are "presumptively valid" according to 47CFR section 68.7b) if no oppositions are received after they have been on public notice for 30 days (see 47CFR section 68.608). A mechanism for oppositions and appeals to proposed technical criteria is provided in FCC rules 47CFR section 68.614, where two alternatives are offered. Firstly, oppositions are to be addressed through the normal appeals procedures of the SDO. If these procedures have been exhausted, then an "aggrieved party" may file their oppositions directly with the FCC.

Processes also exist for expediting the creation and adoption of new technical criteria that circumvents some of the more time-consuming SDO procedural steps under certain special conditions. These processes (a) require no less than 60 days for balloting and public notice, (b) allow for whatever time is necessary for preparing the written document that contains the criteria, and (c) are in line with ANSI procedures for the establishment of trial or interim standards. For example, an expedited process was used to publish the first ACTA technical criteria because the FCC required these criteria to be identical to what previously had been in Part 68. Consequently, there were no significant changes from what had been the prior technical criteria, only the manner in which they were documented.

For more information about processes for developing technical standards, including the expedited approval process and methods for handling complaints and appeals, refer to the "*TIA Engineering Manual*," available from the Telecommunications Industry Association at: <http://www.tiaonline.org/standards/sfg/engineering_manual.cfm>.

12.2 Waiver of FCC Rules

In general, the FCC will not accept any waiver petitions dealing with matters it has delegated to the ACTA (see above). While the FCC delegated TTE technical criteria to industry, it retained certain rules affecting TTE within 47CFR Part 68. These include hearing aid compatibility, volume control rules (section 68.415), and certain procedural or administrative matters.

FCC rules for waivers are contained within 47CFR sections 1.3, 1.925, and 68.5. In brief, the Commission may waive any of its rules by its own motion or on petition if good cause exists. Anyone can petition the FCC for a waiver of its requirements to allow some new technology or service. However, the FCC will not grant waivers unless they are satisfied that the evidence provided with that waiver petition shows that the waiver has benefit and is in the public interest, and that compliance with the existing requirements is infeasible or would make the product or service too costly. Waivers are sometimes granted if compliance with a rule is in conflict with the underlying rationale for the rule, or if unique or unusual conditions exist. For TTE specifically, the FCC also looks at the potential for harm to the telephone network. Finally, waivers that are granted are not assumed permanent. The FCC may review and discontinue any waiver.

12.2.1 Process Guidelines for Part 68 Waivers

Below is a recommended process for filing waiver requests for Part 68 rules with the Commission. Petitioner should:

a) Track FCC activity related to the particular technology (for example, ADSL) <http://www.fcc.gov>. Petitioner might consider contacting the FCC's Wireline Competition Bureau to find out if they would be willing to discuss the petitioner's waiver plans and provide guidance.

b) Petitioner should cConsider discussing the waiver with industry subject matter experts, including potential supporters and opponents, to get a better appreciation of concerns that may be raised later.

c) Prepare a waiver petition.

d) Submit the waiver petition to the FCC.

e) Be prepared, if requested, to discuss the waiver petition with the Commission prior to the issuance of a public notice.

f) Be on the alert for the issuance of the public notice. For example, check the FCC's Daily Digest.

g) Be prepared for possible exparte discussions with the Commission after the issuance of the public notice.

h) Review all of the comments that are filed.

i) Be prepared to file reply comments that address the concerns that are raised during the initial comment period.

12.2.2 Format Guidelines for Part 68 Waiver Petitions

The following are suggestions for the format or syntax of the text of a waiver petition.

- Paragraphs should be numbered so that subsequent filings can easily and accurately reference the appropriate paragraph.
- The petition should be provided electronically in one of the popular word processor formats (for example, Microsoft Word, *.doc or WordPad, *.wpd).
- Other data (for example, footnotes, technical and legal references, etc.) may be required to complete the waiver request.

As a guide, the petition should follow this outline (sections and headings shown below are for descriptive clarity only and are not required in the actual petition):

1) Introduction - state the purpose of the petition. For example:

   ABC respectfully requests that the Commission grant this petition for a waiver of Section 68.308(e)(1) for it's XYZ product, that otherwise meets the requirements of Part 68, so that ABC can certify this equipment so the public can benefit from this product.

   Provide a description of the product and its intended use. Be sure to include a description of the type of network service that the equipment attaches to (for example, non-loaded analog loop-start switched access line).

2) Benefits to the Public - describe the benefits to the public of this equipment. It is useful here to highlight current FCC initiatives. For example:

   One of the goals of the Telecommunications Act of 1996 is to encourage the deployment of advanced telecommunications capability to all Americans in a reasonable and timely manner (Section 706). The XYZ product is one way of rapidly making such advanced capabilities available to the public because the XYZ product is an ADSL modem that provides advanced communications services and it uses the embedded loop plant.

3) Product Will Not Cause Harm - describe why the equipment will not harm the network if a waiver is granted. For example:

   The XYZ product otherwise conforms to all of the applicable Part 68 requirements for loop-start and analog voiceband equipment. The XYZ product will not cause harm if 68.308(e)(1) is waived because the product meets the following alternative criteria:

   a) The transmitter spectral response above 4 kHz falls under the PSD mask specified in Figure 32, section 7.14, of ANSI T1.413-1998.

b) The aggregate power level in the 25.875 to 138 kHz frequency band does not exceed the 12.5 dBm limit specified in section 7.15.3 of T1.413.

c) The transverse balance measured over the entire range of frequencies between the upper and lower -20 dB points associated with the maximum combined upstream and downstream frequency bands above 4 kHz meet or exceeds the requirements in 68.310(c) in both the on-hook and off-hook states.

The specifications cited above are sufficient to protect the network from crosstalk harm because they are industry-recognized limits that control intentional and unintentional metallic signals and longitudinal symmetry to the degree necessary to prevent the conversion of metallic signals into unwanted longitudinal signals. The ATU-R signal power limits in T1.413 are not controversial and have received wide industry acceptance. The same limits appear in G.992.2 and Technical Report 59.

All of the aforementioned parameters are specified for asymmetric systems in the current version of the draft proposed standard for Loop Spectrum Management that is currently under development in T1E1.4. That draft standard states that any equipment that meets the specifications associated with spectrum management class 5 are considered spectrally compatible with voicegrade, DDS, ISDN, HDSL, HDSL2, ADSL, and T1 technologies.

4) Test Results - provide the actual test results in Attachment A and identify test configurations, test sets, measurement impedance, etc., in Attachment B.

5) Conclusion or Summary - explain why the FCC should approve the petition quickly (for example, time is of the essence). Also, give examples of other similar waivers that have already been granted.

APPENDIX A: GENERAL INFORMATION

This appendix contains general information which may be useful to responsible parties or those people or testing facilities who are involved in telecom compliance testing.

PRE-REGISTRATION (CERTIFICATION) FIELD TRIAL POLICIES

(FCC Public Notice 14953, March 30, 1979 and updated February 28, 1989)

Technical field testing of premises telecommunications equipment in the development phase (under supervised conditions) is permitted prior to receiving a certification grant. These public notices provide the details on why field trials can be conducted, the maximum number of units allowed, when equipment can remain connected following a trial and other details.

VOLUNTARY PART 68 REPORTING OF TELEPHONE RFI AND BELLTAP COMPLIANCE (FCC Public Notice 70139, October 9, 1996)

The FCC asked manufacturers to voluntarily indicate if their products comply with the new ANSI/TIA-631 RFI immunity standard and the EIA 470A belltap standard.

KIT APPROVAL

Kits which are designed to be assembled by the untrained may be approved if the manufacturer demonstrates that the circuitry interfacing the network is either preassembled or that critical elements can be assembled in a foolproof manner and still comply with the rules. Manufacturers are reminded that they remain responsible for ongoing compliance. Kit manufacturers should contact the ACTA if they have any questions.

PRIVATE LINE CONNECTIONS

The RJ series of jacks should not be used for connecting data equipment to non-switched private line networks, specifically, the service equivalents of the pre-divestiture Series 3002 (Category II, Tariff # 260) service. There is a substantial difference in transmit levels permitted in the private line service and those permitted in the public switched network. The industry standard is now an 8-pin keyed modular jack known as the USOC JM8 (Telcordia Technical Reference: TR-EOP-000242, Issue 1, released May 1985). Refer to ATIS Technical Report No. 5 for a JM8 wiring diagram.

DESIGNING DATA EQUIPMENT FOR USE WITH FIXED-LOSS OR PROGRAMMED DATA JACKS

The necessary gain-adjusting resistive pads or resistors are contained in the RJ41S and RJ45S data jacks. It is not permissible to build in strapping options in the equipment to bypass the need for these jacks. Such circuitry cannot be approved.

CENTRAL OFFICE DIFFERENCES

Designers should be aware that the telephone system is not homogeneous. There are differences in network equipment and their configurations among and within the many telephone companies. Refer to the ANSI T1.401 series standards for more information.

MAKE BUSY

It is recommended that designers and users of equipment with the make-busy feature contact their local telephone company to coordinate its use. In many modern digital central offices, the line is locked out if the receiver is off-hook for more than 252 seconds. When the receiver is returned to the on-hook position, it takes 10 to 15 seconds before a dial tone is established. However, this protocol is not universal.

RJ CONNECTOR USAGE

While there are no prohibitions for the use of the 6-pin, 8-pin miniature jacks and 50-pin jacks as equipment-to-equipment connections, they should not be identified by their RJ designators. The term RJ stands for **"Registered Jack**" and denotes four things: a specific connector style, specific services, a specific wiring configuration or pin-out, and a network interface function. So an RJ45 is not a generic 8-pin connector; rather it is a specific wiring configuration for a programmed data jack network interface used with certain types of modems.

# # #

APPENDIX B: EXAMPLE SUPPLIER'S DECLARATION OF CONFORMITY (SDOC)

This appendix provides a boilerplate example of the information that must be contained in a U.S. TTE Supplier's Declaration of Conformity (SDoC). The Responsible Party is not bound by this format, and may wish to edit the material as suitable for the declared product. Also, the declared technical criteria may change as ACTA adopts revisions to existing standards or publishes new standards that affect the declared product (see the ACTA Web site for updates). Text for the submitter to replace has been enclosed within <angle brackets>, bolded, and *italicized.*

*N*otes to assist the submitter have been enclosed within [square brackets] and italicized. In some cases example language is furnished. These words shouldn't appear in an actual SDoC.

Supplier's Declaration of Conformity

Reference Number: _____ (Optional)

Place of Issue: _____

Date of Issue: _____

<Responsible party> located at ***<company address>*** in the United States of America hereby certifies that the ***<product name and model number>*** bearing labeling identification number ***<labeling number based on TIA TSB-168>*** complies with the Federal Communications Commission's ("FCC") Rules and Regulations 47CFR Part 68, and the technical criteria adopted by the Administrative Council on Terminal Attachments ("ACTA") ***<specification number(s), title, revision, and date of issue>*.**

[Submitter note - Below is an example of the technical criteria to be listed.:]

TIA/EIA/IS-968, Telecommunications – Telephone Terminal Equipment -Technical Requirements for Connection of Terminal Equipment to the Telephone Network, July 2001.

[Submitter note - insert the following (if applicable) for TTE (with a handset) compliant with FCC rules in 47CFR Section 68.316.]

<Responsible party> hereby asserts that the ***<product name and model number>*** complies with §68.316 of the FCC Rules and Regulations defining Hearing Aid Compatible (HAC) and, as such, is deemed compatible with hearing aids.

[Submitter note - insert the following (if applicable) for TTE (with a handset) that is <u>not</u> compliant with 47CFR Section 68.316.]

<Responsible party> hereby issues notice that the ***<product name and model number>*** is not compliant with §68.316 of the FCC Rules and Regulations defining Hearing Aid Compatibility (HAC). Accordingly, the FCC prohibits the use of this product in certain locations, such as, ***<insert list of locations per 47CFR Section 68.112>.***

[Submitter note - insert the following if the TTE is designed to operate in conjunction with other equipment, the characteristics of which can affect compliance, as specified in 47CFR Section 68.324(b).]

<Responsible party> hereby asserts that the ***<product name and model number>*** is designed to operate in conjunction with other equipment, the characteristics of which can affect compliance of the ***<product name and model number>*** with Part 68 Rules and Regulations and/or with technical criteria adopted by the ACTA. The other equipment is ***<list all product name(s) and model number(s)>*** and the ***<Supplier's Declaration of Conformity or Telecommunication Certification Bodies certificate(s)>*** relevant to each product listed are enclosed.

<Name of company officer>

<Function of officer>

<Signature>

[Submitter note - An SDoC is considered a legally binding contract and must be signed only by individuals authorized to enter their company into a contractual agreement.]

# # #

APPENDIX C: EXAMPLE TCB CERTIFICATE

Certificates issued by Telecommunication Certification Bodies (TCBs) approving telecom terminal equipment (TTE) for connection to the U.S. public switched telephone network may vary between TCBs. Unlike RF device certificates (also issued by some TCBs), where the appearance is pre-determined by the software provided by the FCC's Office of Engineering and Technology (OET), the FCC does not specify the form of the Part 68 certificate either in the enabling legislation nor in any subsequent guidance.

Consequently, some TCBs may choose to emulate the old FCC Form 484, replacing some references to the FCC with their own identification. Other TCBs opt for a certificate somewhat closer in appearance and size to the more informative FCC/OET format. An example of this latter certificate is shown below.

PART 68 EQUIPMENT CERTIFICATE (Sample)

Certificate Number: ***Date:***

Certification under Part 68, Connection of Terminal Equipment to the Telephone Network

The product listed below, subject to the provisions of 47CFR Part 68, has been found to comply with the Rules of the Federal Communications Commission and Technical Requirements For Connection of Terminal Equipment To the Telephone Network, TIA/EIA/IS-968, by the Telecommunication Certification Body as listed below:

Type of Application:

Responsible Party: ***Manufacturer:***

Address:

Equipment Code:

Type of Equipment:

Trade Name(s) ***Model Number(s)***

AC REN ***Connectors:***
Authorized Network Port(s):
Service Order Code(s):

Telephone equipment containing radio frequency circuitry may require additional equipment authorization(s) to be issued by the FCC prior to marketing such equipment in the United States. Failure to obtain the required equipment authorizations, when required, may subject the Responsible Party to fines and penalties provided for in Table V, Sections 501 and 503 of the Communications Act of 1934, as amended.

Each piece of equipment bearing the listed trade name(s) and model number(s) listed above shall be labeled as specified in 47 C.F.R. Section 68.300 and Telephone Terminal Equipment, Labeling Requirements, TIA/EIA/TSB168.

A copy of this certificate must be presented to the U.S. Customs Service when any foreign made products identified herein are imported into the U.S.

The Telecommunication Certification Body listed below has been authorized by the FCC to issue this Equipment Certificate. The equipment listed above has been shown to comply with the applicable rules by the Responsible Party.

TCB ID:

[TCB Logo]

Name of TCB:
Address of TCB:
Phone Number of TCB:

APPENDIX D: ACTA INDEMNIFICATION AND LIABILITY STATEMENT

This appendix describes the indemnification and liability statement required by the ACTA with every filing of new equipment or products to its database. Also included is an example statement that will allow responsible parties to meet these requirements. Responsible parties should use this example as a template, create a letter or document where the indicated data or signatures in ***<italics>*** are replaced with information specific to the product, and include the resulting document with its ACTA database filing.

D.1 The ACTA requirement

The Administrative Council for Terminal Attachment (ACTA) requires that responsible parties indemnify and hold harmless the ACTA, its members, affiliates, secretariat, and sponsors, and each of their officers, directors, employees, participants, agents, and representatives (the ACTA Parties), of and from any and all liabilities, losses, costs, damages, claims, suits or expenses (including reasonable attorneys' fees and costs) of any kind whatsoever, arising from or relating to the telephone terminal equipment (TTE) or the Responsible Party's Supplier's Declaration of Conformity (SDoC) or Telecommunications Certification Body (TCB) Grant of Certification submitted to ACTA.

The ACTA will require the Responsible Party to acknowledge and agree in writing that ACTA, and the ACTA Parties shall not, and do not, assume, and expressly disclaim, any and all liability, responsibility, and obligation in connection with any loss, damage, or claim arising from or relating to, in any way, ACTA's inactions or actions relating to publication, distribution, or other use of any information relating to or concerning the TTE. This includes, without limitation, any claims or liabilities sounding in contract, tort (including negligence or strict liability), or otherwise, and in no circumstances shall ACTA or the ACTA Parties be liable for any loss of profits, loss of use, loss of production, loss of goodwill, or incidental, direct, indirect, or consequential damages of any kind.

D.2 Example Statement:

Date

ACTA Secretariat
c/o ATIS
1200 G Street, NW
Suite 500
Washington, DC 20005

RE: Statement of Indemnification, Liability, and additional information about the ***<insert product name, model number, and labeling number>*** (the Product).

ACTA Secretariat:

<Responsible party> hereby indemnifies and holds harmless the Administrative Council for Terminal Attachment (ACTA), its members, affiliates, Secretariat, and Sponsors, and each of their officers, directors, employees, participants, agents and representatives (the ACTA Parties), of and from any and all liabilities, losses, costs, damages, claims, suits or expenses (including reasonable attorneys' fees and costs) of any kind whatsoever, arising from or relating to the Product, or ***<Responsible party's>*** Supplier's Declaration of Conformity (SDoC) or Telecommunications Certification Body (TCB) Grant of Certification submitted to ACTA in connection therewith.

<Responsible party> hereby acknowledges and agrees that the ACTA, and the ACTA Parties shall not, and do not, assume, and expressly disclaim, any and all liability, responsibility and obligation in connection with any loss, damage or claim arising from or relating to, in any way, ACTA's inactions or actions relating to publication, distribution or other use of any information relating to or concerning the Product, including without limitation in connection with any claims or liabilities sounding in contract, tort (including negligence or strict liability), or otherwise, and in no circumstances shall ACTA or the ACTA Parties be liable for any loss of profits, loss of use, loss of production, loss of goodwill, or incidental, direct, indirect or consequential damages of any kind.

Pursuant to 47CFR §68.218 and §68.348 in the FCC rules and regulations, no changes will be made to the above referenced Product or its protective circuitry that would result in any change in the information contained in the corresponding SDoC or TCB Grant of Certification ***<insert SDoC or TCB Grant of Certification Reference Number (if applicable) >*** without filing of a new SDoC or TCB Grant of Certification.

[Submitter note: use the following language, if applicable.]

As specified in 47CFR §68.324(e)(3), a copy of the SDoC is freely available to the general public, and accessible to the disabled community, on the company Web site at ***<insert URL>.***

[Submitter note: use the following alternative language, if applicable.]

In accordance with 47CFR Section 68.324(e)(3), ***<Responsible party>*** hereby informs the ACTA that a copy of the SDoC is not available to the general public, and accessible to the disabled community on a functional and reliable Web site that it maintains.

<Name of company officer>

<Function of officer>

<Signature>

[Submitter note: This is considered a legally binding contract and must be signed by individuals authorized to enter the RP into a contractual agreement.]

# # #

APPENDIX E: TTE INFORMATION FOR THE ACTA DATABASE

The ACTA requires certain product information with each telecom terminal equipment (TTE) filing in its database. Shown below are a list and descriptions of these information items required as of this writing. However, this list is subject to change. Now information is submitted in *.pdf on CD ROM. In the future on-line filing may be implemented. The reader should contact the ACTA or visit their Web site at <http://www.part68.org> for any changes or updates.

The ACTA requires a complete set of information in the first filing for any new equipment. Currently, change filings submitted not using the on-line system to the ACTA secretariat should contain all the required information. In the future on-line filings that involve only changes to the information already in the database need only include the existing approval number and that which was changed.

This information is to be provided on a standardized ACTA form. The latest version of this form can be downloaded from ACTA Web site at: http://www.part68.org/>.

E.1 List of Required ACTA TTE Database Information

Filing with the ACTA database is done by providing certain information on a standardized ACTA form, "Telephone Terminal Equipment (TTE) Submission Form." Each information item is numbered, as shown in the table below.

Ref	Item Description
1a.	Name of Organization Granting Approval or Submitting Request for RPC
1b.	TCB Identification Number (if applicable)
1c.	(Supplier's) Declaration of Conformity (if applicable) Included? (yes/no)
2.	Terminal Equipment Approval Date
3.	Product Identifier
4.	Responsible Party contact information
5.	Agent for Service: Name, Department, Address and Phone number. TTY and FAX numbers, and a Web site URL, are also recommended.
6.	Equipment Description
7.	Responsible Party Code (RPC)
8.	Manufacturer's Code (if available)
9.	Current Approval Number (only if Modification, Notice, or Re-certification, and/or re-declaration filing)
10.	Equipment Code
11a.	List of Brand or Trade Name(s) Including New and Existing Names
11b.	List of New and Existing Model Number(s) for Each Brand or Trade Name
12.	Network address signaling code

Ref	Item Description
13a.	AC Ringer Equivalence Number (REN)
13b.	Hearing Aid compatibility (YES/NO/NA)
13c.	USOC Jacks
13d.	Repetitive Dialing to Single Number? (YES/NO)
14.	Filing Status
15.	Facility Interface Code(s)
16.	Manufacturer Port ID
17.	Service Order Code(s) (SOC)
18.	Answer Supervision Code(s)
19.	Ancillary Equipment

E.2 Detailed Descriptions of Required Information

Item 1a: Name of Organization Granting Approval or Submitting Request for RPC

List the complete company name, address, city, state and zip code of the organization (attesting to the terminal equipment's conformity to Part 68 rules and ACTA-adopted technical criteria). List the Submitter's Name (this should be an employee of the same company), phone number, and e-mail address. If the submission is from an SDoC, the information should be similar to **Item 4** below.

Item 1b: TCB Identification Number (if applicable)

For filings from a Telecommunication Certification Body (TCB), list the TCB identifier for terminal equipment information submitted by a registered TCB. (This is not applicable for SDoC Filings.)

Item 1c: Declaration of Conformity Included? (yes/no)

Note: This item refers to the Supplier's Declaration of Conformity.

Provide a copy of the SDoC for terminal equipment submitted under a SDoC. Select 'yes' if you have included the Supplier's Declaration of Conformity. For an SDoC, this information is required for processing. SDoC reference number may be included.

Item 2: Terminal Equipment Approval Date

Provide the date the terminal equipment was approved (date of TCB Certificate or SDoC Statement), in the U.S.-typical date format MM/DD/YYYY. For example: 09/23/2001.

Item 3: Product Identifier

Provide the Responsible Party's unique product identifier.

The product identifier is part of the "US" number shown on the product label. This is a string of characters that, when combined with the RP's code, uniquely identifies the product. For a

detailed description, refer to *TIA/EIA Telecommunications Systems Bulletin ("TSB") -168, Telecommunications –Telephone Terminal Equipment –Labeling Requirements.*

Example: TSB-168 specifies that the product label show certain information coded in a string of characters of the form "**US: AAAEQ##TXXX,"** where **XXX** is the product identifier (one to nine characters long). The Responsible Party defines this identifier.

Note: When the FCC did all TTE registration prior to July 2001, they historically assigned a five-digit product identifier number. Example: **AAABBB-NNNNN-XX-Y**, where NNNNN was the assigned number. Parties submitting data for products that will retain an existing FCC Registration number (such as modification or change filings to previously FCC-registered products) should enter the FCC-assigned five-digit number. Do not enter in the entire label, just the product identifier.

Item 4: Responsible Party

List the complete name and address of the responsible party; including the contact information of the submitter (e.g. email and phone number). The Responsible Party is the individual or company that accepts responsibility for the product and its compliance to Part 68 rules and ACTA-adopted technical criteria. The Responsible Party for a SDoC must be located in the United States (47CFR Section 68.321). For parties utilizing the SDoC method, this may be the same information contained in Item 1a.

Item 5: US Service Center or Agent for Service

FCC rules in 47CFR Section 68.418 requires that every Responsible Party designate one or more Agent for Service and provide the ACTA with the name or department designation, business address, telephone number, TTY number (if one exists), FAX number, and Internet address of the agent(s).

The Agent for Service duties include handling complaints made under the FCC's hearing aid compatibility (HAC) and volume control rules (see 47CFR Section 68.417). The Agent for Service also is the FCC's point of contact for all notices, inquiries, Orders, decisions, and other FCC pronouncements.

Note: This field may be identified as US. Service Center or Agent for Service.

Item 6: Equipment Description

For new filings (original filings) provide a brief description (in 10 words or less) of the terminal equipment, for example: "Two-line telephone with built-in answering machine." For modification filings, provide a brief description of the technical change that affects ACTA database information.

Item 6a: Country of Origin

This is only required for modifications and notices of change for equipment previously certified by the FCC. It is the second set of three letters in the FCC registration number used prior to July 2001. Examples are USA for the United States, CAN for Canada, HKG for Hong Kong, TAI for Taiwan, CHN for China, etc. A complete list of internationally-accepted three-letter country codes is contained in the IS0-3166 standard country codes list.

Item 7: Responsible Party Code (RPC)

List applicant's assigned ACTA RPC or FCC Grantee Code. If you do not have one you will need to submit a Request for an RPC. (See Section 8.4.1 for more information about Responsible Party Codes.)

Item 8: Manufacturer's Code (if available)

List manufacturer's previously assigned FCC ID code(s), if any; otherwise leave blank.

Item 9: Current Authorization Number

Provide current approval number(s), if applicable. This is required for modification, notice of change, and re-certification applications.

Item 10: Equipment Code

Refer to *TIA/EIA TSB-168, Telecommunications –Telephone Terminal Equipment –Labeling Requirements* for a complete list of codes. Only one code may be specified. Select the code that most accurately describes your product. If your equipment is currently approved, include the equipment code already assigned to your equipment. Example: TE.

Item 11a: List of Brand or Trade Name(s) Including New and Existing Names

List of trade or brand names for the TTE, including new and existing trade names, under which this product will be marketed and sold. Note: The type of application being made impacts what information is to be included in this field. See also **Item 14** below.

Item 11b: List of New and Existing Model Number(s) for Each Brand or Trade Name

List model numbers for each trade or brand name under which this product will be marketed and sold. Note: The type of application being made impacts what information is to be included in this field. Example: TelTech 2001X. See also **Item 14** below.

Item 12: Network address signaling code

Show the network address signaling code. This is required for all applications. Indicate the type of network address signaling by one of the following code letters:

T if the device performs dual-tone multi-frequency (DTMF) signaling;

R if the device performs rotary (pulse) signaling;

E if the device performs either DTMF or pulse signaling (user-selectable);

N if the device does no address signaling.

Item 13a: AC Ringer Equivalence Number (REN)

The AC REN is represented here in the form "REN (ac): n.nx," where n.n is the REN expressed in units and tenths and x is the appropriate ringer type (for example: REN (ac): 1.0B) . Only two ringer types are used: A for 20 and 30 Hz resonant ringers, and B for ringers that work over the full range of 15.3 to 68 Hz. If the REN calculates to a value of less than 0.05, use 0.0. If Type A is to be used, calculate its value at 20 and 30 Hz and use the larger value. If the B type is to be used, calculate its value over the range of 15.3 to 68 Hz and use the largest value. For more information, refer to *TIA/EIA TSB-168, Telecommunications –Telephone Terminal Equipment –Labeling Requirements.*

Item 13b: Hearing Aid Compatible (YES/NO/NA)

Telephones (corded and cordless) imported into (or manufactured in) the U.S., unless otherwise exempt, must be hearing aid compatible (magnetic flux strength as per FCC rules 47CFR Section 68.316). All HAC telephones manufactured or imported after April 1997 must prominently display the designation “HAC”. (See also Section 10 on Disability Issues.) Enter Yes, No, or Not Applicable (N/A).

Telephones that are not hearing aid compatible are subject to special package labeling requirements specified in 47CFR Section 68.224.

Item 13c: USOC Jack(s)

List USOC codes describing type(s) of jack(s) required at the network interface, for example RJ11C. Use N/A for adjuncts that do not make direct connection to the network. Use "hardwired" for meter readers and alarm dialers, if applicable (some alarm dialers preferentially use the type RJ31X jack because of its call preemption feature). For more information, refer to *ATIS Technical Report No. 5*.

Item 13d: Repetitive Dialing to a Single Number (YES/NO)

Many telephones, dialers, and alarm systems have the capability of repeat dialing to a single number. Indicate if the device or system has this feature. In FCC CC Docket No. 81-216, Fourth Notice of Proposed Rulemaking, FCC document number 86-352, the Commission permitted unlimited computer-controlled automatic redialing but reserved the right to revisit this decision to ensure network protection, if necessary. Enter Yes or No.

Item 14: Filing Status

Describe the primary reason for the filing. Each filing must demonstrate that the covered equipment will not harm the network.

- **Original Filing -** Original filings are required for covered equipment to be sold that previously has not been approved. Each filing must be complete and without reference to a previously submitted application.
- **Modification Filing**

  Modification Filing - Modification filings are required to report changes to approved equipment when these changes would affect ACTA database information of that equipment and do not change the approval number.

  A modification filing will be processed only when an original filing for the terminal equipment has previously been processed.
- **Notice of Change (Notice) Filing -** Notice filings are required to maintain database accuracy when no electrical change has been made to the equipment. A notice filing is required, for example, when a trade name or model number is added to a previously approved device or system. Typically, such additions describe cosmetic variations, or are for marketing the product under a different trade name or model number. A notice filing will be processed only when an original filing for the terminal equipment has previously been processed.
- Re-certification/re-approval applications are required for limited cases requiring the processing of a new filing. They can include:

  a) Changes in the network address signaling code *(e.g.,* changing from a T to an E).

  b) Establishing a new classification for equipment *(e.g.,* a change to a MF classification based on a previously approved KF system).

  c) Adding a new manufacturer; when manufacturing/distribution rights are transferred to another party.

  d) When a vendor wants its own approval for marketing reasons (with permission of the original responsible party).

Item 15: Facility Interface Codes (FIC)

This is a partial list of common FIC codes. For a more complete list refer to *ATIS Technical Report No. 5*. Use the code that most accurately describes the equipment.

Analog Services

FIC	Description
OL13A.	2-wire, Class A, Private Branch Exchange (PBX) off-premises station port
OL13B	2-wire, Class B, PBX off-premises station port.
OL13C	2-wire, Class C, PBX off-premises station port.
LADC	Local area data channels *
METALLIC	2- or 4-wire metallic private line. *
TL11E	E&M Tie Trunk, Lossless, 2W, Type I, originates with ground on E
TL11M	E&M Tie Trunk, Lossless, 2W, Type I, originates with battery on M
TL12E	E&M Tie Trunk, Lossless, 2W, Type II, originates with ground on E
TL12M	E&M Tie Trunk, Lossless, 2W, Type II, originates with battery on M
TL31E	E&M Tie Trunk, Lossless, 4W, Type I, originates with ground on E
TL31M	E&M Tie Trunk, Lossless, 4W, Type I, originates with battery on M
TL32E	E&M Tie Trunk, Lossless, 4W, Type II, originates with ground on E
TL32M	E&M Tie Trunk, Lossless, 4W, Type II, originates with battery on M
02AC2	2-wire voice transmission with customer-provided ringing 600 ohms*
02GS2	2-wire ground-start signaling closed end provided by end user 600 ohms
02LA2	2-wire, approved, Class A, PBX off-premises station port 600 ohms
02LB2	2-wire, approved, Class B, PBX off-premises station port 600 ohms
02LC2	2-wire, approved, Class C, PBX off-premises station port 600 ohms
02LR2	2-wire Private Line Automatic Ringdown, ringing from Local Exchange Carrier (LEC), 600 ohms*
02LS2	2-wire loop-start signaling closed end provided by end user 600 ohms
02NO2	4-wire voice transmission with no LEC-provided signaling 600 ohms*
02RV2.0	2-wire loop reverse battery signaling, loop closure from customer, reverse battery from LEC, 600 ohms. Used for PBX-E911 trunks. *
02RV2.T	2-wire loop reverse battery signaling, loop closure from customer, reverse battery from LEC, 600 ohms. Used for Direct Inward Dialing (DID) ports.
04AC2	4-wire voice transmission with customer-provided ringing 600 ohms*
04GS2	4-wire ground-start signaling closed end provided by end user 600 ohms*
04LR2	4-wire Private Line Automatic Ringdown, ringing from LEC, 600 ohms*
04LS2	4-wire loop-start signaling closed end provided by end user 600 ohms*
04NO2	4-wire voice transmission with no LEC-provided signaling 600 ohms. (Applicable to “hoot ‘n holler” circuits.) *

Analog Services

FIC	Description
04RV2.T	2-wire loop reverse battery signaling, loop closure from customer, reverse battery from LEC, 600 ohms. Used for DID ports. *
06EA2.M	6-wire Type I E&M signaling – Battery on M lead to originate, 600 ohms. Same as TL31M except with transmit TLP values of -2 to +3 dBm.
08EB2.M	8-wire Type II E&M signaling – Battery on M lead to originate, 600 ohms. Same as TL31M except has expanded receive TLP values of 0 to –8 dBm.

*These services are subject to local availability

Digital Services	
FIC	**Description**
02DU5.56B	2-wire Switched 56 kbps Type III Public Switched Data Service (PSDS), 135 ohms.
02DU7.56B	2-wire Switched 56 kbps Type II PSDS, 124 ohms.
02IS5	2-wire Basic Rate Integrated Services Digital Network (ISDN), 135 ohms.
04DU5.19	4-wire 19.2 kbps digital interface, 135 ohms.
04DU5.19S	4-wire 19.2 kbps digital interface with secondary channel, 135 ohms.
04DU5.24	4-wire 2.4 kbps digital interface, 135 ohms.
04DU5.24S	4-wire 2.4 kbps digital interface with secondary channel, 135 ohms.
04DU5.38	4-wire 38.4 kbps digital interface, 135 ohms.
04DU5.38S	4-wire 38.4 kbps digital interface with secondary channel, 135 ohms.
04DU5.48	4-wire 4.8 kbps digital interface, 135 ohms.
04DU5.48S	4-wire 4.8 kbps digital interface with secondary channel, 135 ohms.
04DU5.56	4-wire 56 kbps digital interface, 135 ohms.
04DU5.56B	4-wire Switched 56 kbps Type I PSDS, 135 ohms.
04DU5.56S	4-wire 56 kbps digital interface with secondary channel, 135 ohms.
04DU5.64	4-wire 64 kbps digital interface, 135 ohms.
04DU5.96	4-wire 9.6 kbps digital interface, 135 ohms.
04DU5.96S	4-wire 9.6 kbps digital interface with secondary channel, 135 ohms.
04DU9.BN	4-wire 1.544 Mbps (DS1) with Super Frame (SF), Alternate Mark Inversion (AMI), no line power, 100 ohms.
04DU9.DN	4-wire 1.544 Mbps (DS1) with SF, Bipolar with eight-zero substitution (B8ZS), no line power, 100 ohms.
04DU9.1KN	4-wire 1.544 Mbps (DS1) with Extended Super Frame (ESF), AMI, no line power, 100 ohms.
04DU9.1SN	4-wire 1.544 Mbps (DS1) with ESF, Bipolar with Eight-Zero Substitution (B8ZS), no line power, 100 ohms. *

*May be used for Primary Rate ISDN.

Item 16: Manufacturer Port ID

Manufacturer's part number or model number for circuit pack or card for that specific network port. Example: 2001X.

Item 17 and 18: Service Order Code(s) (SOC) and Answer Supervision Code(s)

This is a partial list of the most commonly used codes.

Service Order Codes	
Analog Services	
SOC	**Description**
9.0F	Full protection to the network from systems using live voice. Only approved terminal equipment can be connected to station ports.
9.0N	Unprotected systems. Requires use of approved protective couplers or filing of affidavits with the Telco. Refer to 47CFR Section 68.215(d) and (e).
9.0Y	Provides full Part 68 protection. Provides signal limiting for ALL signal sources (not just from Music On Hold (MOH).
7.0Y	Provides total protection to the network for connection of private communication systems.
7.0Z	Host system port provides partial protection to the network for connection of private communication systems. Requires filing of signal power affidavit with Telco.
Digital Services	
SOC	**Description**
6.0Y	Provides total protection, including billing protection and encoded analog content.
6.0F	Combinations of equipment provide full protection to digital service. Billing protection and encoded analog protection are provided either by including auxiliary equipment within the approval envelope or by use of a separately approved device.
6.0N	Does not provide billing and encoded analog protection. Uses either an integrated or external Channel Service Unit (CSU).
6.0P	Provides billing and encoded analog protection (similar to 6.0F) but requires separate CSU.

Answer Supervision Codes for Systems and Terminal Equipment	
Code	**Description**
AS.2	System ports that provide answer supervision (for system types such as CD, KF, MF, PF, VM, etc.).
AS.3	Terminal equipment or combinations of terminal equipment that provides answered supervision.

Item 19: Ancillary Equipment

Enter each model and list subsystem elements by name and manufacturer's port number that fall within the product's approval. If telephones and consoles are HAC, indicate by preceding the model number with "HAC." This information is not required for single- and two-line devices (including one and two line cordless phones). For cordless phones used as stations, indicate the frequency band used and that digital security coding is employed.

The list should look something like this:

	Filing Status	Trade Name	Model Number	List of Ancillary Equipment by Type	Manufacturer's Identifier
1					
2					
3					

Notes:

a) The Filing Status column indicates the type of filing for all entries using these codes:

- NEW -- New with this submission
- MOD -- Modified from previous submissions
- PREV -- Previously approved, no change
- MD -- Manufacturing Discontinued, may exist in product in the field
- RECERT -- Re-Certification

b) Ancillary Equipment refers to equipment used with approved TTE that could have an affect on its "approvability," but may not connect directly to the PSTN itself. This may include, but is not limited to:

- Attendant console
- Proprietary telephones that operate behind a PBX or a key system
- Modems
- A music-on-hold device connected to an approved TTE that has a hold feature.
- Equipment that may or may not be approved on its own but is included under the umbrella of an approved system.

Wall-mounted power supplies used with approved equipment are NOT ancillary equipment in this context.

ACTA Product Label

If the submission requires a new approval number (e.g. original submission) refer to TIA/EIA/TSB-168 for details.

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APPENDIX F: PART 15, TTE AND RF INTERFERENCE ISSUES

F.1 Applicability Of Radio Frequency Regulations To Telephone And Data Equipment

The Federal Communication Commission (FCC) classifies some TTE as radio frequency (RF) radiating devices. For example, corded TTE containing digital circuitry operating at a clock rate greater than 9 kHz is defined as an incidental RF radiator. RF equipment includes TTE with digitally-controlled DTMF, memory or advanced features, and cordless phones and headsets. RF equipment must also be approved in accordance with 47CFR Part 15 of the FCC rules.

The Federal Communication Commission (FCC) classifies equipment with digital circuitry operating at frequencies greater than 9 kHz as radio frequency (RF) devices. Examples of TTE that fall into this category may include corded telephones, TTE with digitally-controlled DTMF, memory or advanced features, and cordless phones and headsets. RF equipment must also be approved in accordance with 47CFR Part 15 of the FCC rules.

While a detailed discussion of these issues is beyond the scope of this document, the reader is advised to become familiar with these requirements. The reader should also note that regulatory approvals for RF and telecom devices are separate and independent processes. Approval to FCC requirements under one sector does not confer FCC approval for the other.

For more information on RF equipment approval contact the FCC. Their Office of Engineering and Technology (OET) publishes several bulletins describing their programs for authorizing digital and RF equipment covered by 47CFR Part 15. These are available for download from: http://www.fcc.gov/oet/info/documents/bulletins/.

F.2 Special Requirements for Importation of RF Devices

Importers of telecom terminal equipment that is also covered by the FCC's Part 15 rules as indicated above will also find it helpful to review certain additional FCC requirements.

FCC rules in 47CFR, Part 2, Subpart K, are concerned with the "Importation of Devices Capable of Causing Harmful Interference." These rules specify the use of FCC Form 740 to declare that imported equipment capable of producing potentially harmful radio emissions complies. The FCC and the U.S. Customs Service work together to enforce this importation declaration requirement.

More information can be obtained by reading Subpart K of 47CFR Part 2, the instructions that come with FCC Form 740, and from the “Frequently Asked Questions” Web page from the FCC's Office of Engineering and Technology at:
<http://www.fcc.gov/oet/faqs/eadfaqs.html>.

Form 740 can be downloaded from the FCC's Web site at:
<http://www.fcc.gov/formpage.html>.

F.3 Radio Frequency Interference To Telephone And Data Terminal Equipment

The FCC receives many complaints about radio frequency interference (RFI) to telephone and data terminals. Typical sources include radio stations, amateur radio, CB, taxicabs, police radios, RF welders, and dimmer switches.

In telephones, any non-linear electrical junction (which includes components such as diodes and transistors) can rectify radio frequency signals, or intermodulate multiple signals to produce interference at new frequencies. In older telephone sets, such as the Model 500 or 2500, RFI is often fixed by connecting a suitable bypass capacitor across the microphone or sometimes the varistor. At times, interference may be generated by nonlinear electrical characteristics of corroded jacks and terminal blocks found in the premises wiring. Use of inexpensive jacks without sufficient gold plating on the contacts has been a major source of this problem. RF filters are available from many retail and wholesale outlets dealing in electronic or telephone equipment.

A generally effective method for reducing RFI is the installation of ferrite toroidal coils made by wrapping a few turns of the telephone line cord around a ferrite core. Ferrite cores are available from most electronic parts stores. Unfortunately, frequency modulation (FM) interference is hard to eradicate.

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